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Coaches' Coaching Competence in Relation to Athletes' Perceived Progress in Elite Sport

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Abstract

This article looks at whether higher levels of perceived coaching competencies focusing on relational issues, were associated with higher satisfaction among elite athletes with their progress in sport. In order to explore this, we investigated elite athletes' perceptions of their coaches' coaching competence (CCS) and how these perceptions related to their own satisfaction with their progress in sport during the last year. The CCS measures core competencies for coaches as defined by the coaching profession (Moen & Federici, 2011). Our hypothesis was partly confirmed as the results revealed that higher perceived coach competencies were associated with higher athlete satisfaction with their progress in sport. This result applies for all the five dimensions of the CCS. However, the group of athletes who are most dissatisfied with their progress in sport do not follow this trend, as they in general score higher on the different dimensions of the CCS compared to the nearby levels.

Keywords: coaching, elite sport, athletes, performance

1. Introduction

Coaching in sport has received much attention in both empirical research and in the sports literature (Chelladurai, 2007; Côté and Gilbert, 2009; Jones, Armour and Potrac, 2004; Jowett & Cockerill, 2003; Myers, et al., 2010). However, coaching in sport still remains an ill-defined and under-theorised field that need to be explored further in order to develop valid and reliable knowledge (Jones, 2006). One reasonable explanation to this argument is the complex reality that characterise the coach role in sport (Abraham, Collins & Martindale, 2006; Cushion, Armour & Jones, 2003; Demers, Woodburn & Savard, 2006; Durand-Bush, Thompson & Salmela, 2006; Saury & Durand, 1998). Researchers claim that training, competition, and managing are the three major domains where coaches need to be effective in their roles (Côté & Salmela, 1996; Côté, et al., 1993; Côté & Sedgwick, 2003; Duffy, 2008). Coaches are therefore concerned with different tasks regarding the physical, technical, tactical, and psychological preparations related to training and competitions, as well as the constant claim for dynamic social interactions with both athletes, their parents, assistant coaches and the team personnel (i.e., managing).

Interestingly, coaching has been established as an own profession in different areas (e.g., business, health care) related to growth and learning during the last three decades (Kimsey-House, et al. 2011; Rostron, 2009). The coaching profession is focusing on relational issues such as trust and respect, attending- and influencing communication skills, a positive and solution focused attitude, and actively involvement of the coachee (Grant, 2006; Liljenstrand & Nebeker, 2008). This study aims to investigate elite athletes' perceptions of their coaches' relational qualities as defined by the coaching profession (e.g., Moen & Federici, 2011, 2012a), and investigate possible relationships between coaches' coaching competence and elite athletes' perceived satisfaction with their own progress in elite sport.

2. Theoretical Background

The importance of relational issues in helping relationships are highlighted within several areas related to growth and learning, for instance in education, leadership, guidance, counselling, and sport (Chelladurai, 2007; Hattie, 2009; Ivey, Andrea & Ivey, 2012; Nohria & Khurana, 2010). It is claimed that the development of individual capacities is influenced by relational factors (Grant, 2006; Kauffman, 2008; Moen, 2010). Coaching as a profession outside of the sport arena was developed to meet the demands and importance of attention and respectful behaviours actively involving others in their own learning process (Kappenberg, 2008).

2.1 Coaching as an Own Profession

Gallwey (1974) and Whitmore (2002) are recognized as two important contributors to the development of the coaching profession outside of the sport arena (Kauffman, 2008). Coaching is still not a protected title as a doctor or a psychologist, but the coaching industry has established branch organisations that are dedicated to advance the coaching profession by setting high standards, providing independent certification, and building a worldwide network of credentialed coaches (Kimsey-House, et al., 2011). Two of the most acknowledged branch organisations are The International Coaching Federation (ICF) and The Coaches Training Institute (CTI). The coaching profession has developed rapidly during the last few decades, and it is still growing in various countries around the world (Grant, 2006; Hall, Otazo, & Hollenbeck, 1999; Rostron, 2009).

The coaching profession has defined coaching as a helping relationship between the coach and the person with whom the coach is engaged, the coachee (Passmore, 2010). The power of the individual as capable of finding solutions to his or her own problems with the help of a facilitating coach is highlighted (Kappenberg, 2008; Moen & Kvalsund, 2008). This approach is a client-centred one influenced by humanistic psychology, which emphasizes the importance of listening to the subjective beliefs of the client (Kahn, 1996; Rogers, 1959). This optimistic and trusting view of human nature is central to the coaching profession today. In this study, the following definition is used: "*Coaching is a method that aims to achieve self-actualization by facilitating learning and developmental processes to promote the resource base of another person. The method is characterized by its active involvement of the coachee through powerful questioning and active listening* (Moen & Kvalsund, 2008)". Thus, in this study coaching is defined as an approach that can be used to fulfil people's potential and improves their talent by focusing on relational issues through goal oriented conversations.

2.2 Coach Competencies

Researchers have noticed that practicing coaches and coachee's are lacking a well-established, reliable and valid instrument for measuring coachee's perceptions of coach competencies as described by the coaching profession (Moen & Federici, 2011, 2012a). A coaching competence scale (CCS), consisting of five dimensions, was developed and tested to help fill this void in the field (Moen & Federici, 2011, 2012a). The CCS consists of five different dimensions of coach competencies as described by branch organisations within the coaching profession (e.g., ICF and CTI); (1) Creating the relationship, 2) Communication attending skills, 3) Communication influencing skills, 4) Facilitating for learning and results, and 5) Making the responsibility clear. In order to be effective and successful in the coaching process, the competencies described in the CCS should be important contributors (Moen & Federici, 2011, 2012a).

2.2.1 Creating the Relationship

The true nature of the coaching relationship is based on mutuality. Mutuality is a relation that is built upon respectful understanding and responsive listening and interacting with the coachee (Gyllensten & Palmer, 2007; Kellett, Humphrey & Sleeth, 2006; Moen, 2010). To create such a relationship, the coach must be able to meet the coachee with attending, trustful, and respectful behaviour.

2.2.2 Communication Attending Skills

The ability to listen is a key technique in coaching (Moen & Kvalsund, 2008; Whitmore, 2009). The coach's attending skills are supposed to give the coachee an impression that he or she has the coach's full attention and is seen, heard, and understood. Listening skills, both active and passive, are important as they enable the coachee to continue to discuss and explore the case in focus (Hargie, 2011; Ivey et al., 2012). Therefore, a core competency for coaches is the ability to use attending skills in their dialogue with the coachee.

2.2.3 Communication Influencing Skills

Once the coach have truly heard and understood the coachee's perspective, the coachee will be much more open and ready for change (Ivey et al., 2012; Moen, 2010; Tschannen-Moran & Tschannen-Moran, 2010). The coach's influencing skills are supposed to influence the coachee's perspective in order to discover new perspectives. This is supposed to influence the coachee's motivation and behaviour in order to achieve changes. Asking powerful questions that are open-ended (beginning with an interrogative who, what, how, where, and when) are important because such questions encourage descriptive and detailed answers from the coachee (Hargie, 2011). Descriptive and detailed answers have the potential to raise the coachee's awareness. Another competency for coaches is the use of influencing skills such as powerful questioning.

2.2.4 Facilitate Learning and Results

Respectful and attending behaviour is supposed to encourage the coachee to be active, involved and to

participate in his or her learning process. Thus, it is the coach's behaviour that facilitates the process (Moen & Federici, 2012b; Tschannen-Moran & Tschannen-Moran, 2010; Whitmore, 2009). The aim is to explore the case in focus from many different perspectives, so that the coachee becomes aware of his or her relationship to this case and the potential for growth and learning in the situation. Another important competency for coaches is therefore the ability to facilitate learning and results.

2.2.5 Make the Responsibility Clear

Extended use of attending skills, especially in the beginning of the conversation, stimulate the coachee to open up, speak, and explore the case in focus. Influencing skills are used to achieve a deeper understanding of the case, and both the coach and the coachee will achieve better knowledge of the case and its forming. This helps them both to become more prepared to take responsibility and make optimal decisions regarding the case. Awareness is a prerequisite for being able to take responsibility in own learning (Weiner, 1992; Whitmore, 2009). It's essential for coaches to clarify that the coachee is responsible in his or her learning process. Another core competency for a coach is therefore defined as the ability to make the responsibility clear between the coach and the coachee.

2.3 Coaching Competencies within Sport

In the field of sport, coaching is normally used synonymous with all the domains coaches have to fulfil in their roles (Chelladurai & Saleh, 1980; Gould, et al., 2002; Jones, 2006; Jowett, 2007; Mallett & Côté, 2006). However, coaching as defined by the coaching profession, is at least one of several domains coaches in sport need to fulfil in order to be effective (Gordon, 2007; Jowett, 2005; Williams, et al., 2003). Since learning and results are essential in the competitive arena in sport, and relational issues are found to be important in order to achieve growth and development among the athletes (e.g., Jowett, 2005a, 2007; Jowett & Meek, 2000), coaching competencies as defined by the coaching profession should be important in sport.

A successful helping relationship between a coach and an athlete in sport should stimulate to grow and develop the athlete's talents (Jowett & Poczwardowski, 2007). Jowett (2005a, 2007) claims that effective coach-athlete relationships are defined by mutuality between coaches' and athletes' feelings, thoughts and behaviours (Jowett, 2005a, 2007; Jowett & Meek, 2000). The importance of common understanding in sport is emphasized through studies of the 3+1 C's constructs: Closeness, Commitment, Complementary, and Co-orientation (Jowett, 2007). Closeness is to which degree the coach and the athlete are connected or the depth of their emotional attachment (Jowett & Cockerill, 2002). Commitment reflects coaches' and athletes' intention or desire to maintain their athletic partnership over time. Complementary defines if the interaction between the coach and the athlete is perceived as cooperative and effective, and co-orientation defines the degree of similarity and emphatic understanding (Jowett, 2007, 2005a).

Interestingly, the coach–athlete relationship is found to be particularly crucial in terms of creating a positive outcome or not for the athlete (Duffy, 2008; Jowett & Cockerill, 2002; Lyle, 1999). Numerous studies have investigated how the leadership behaviours of coaches can affect athletes' satisfaction, performances, self-esteem, confidence, and anxiety (Chelladurai, 1990; Jowett & Cockerill, 2002; Jowett & Ntoumanis, 2004; Olympou, Jowett & Duda, 2008). Other studies that have investigated relationship issues claim that effective relationships include basic ingredients such as empathic understanding, honesty, support, liking, acceptance, responsiveness, friendliness, cooperation, caring, respect, and positive regard (Jowett & Cockerill, 2003; Jowett & Meek, 2000). On the other hand, research claims that ineffective relationships are undermined by lack of interest and emotion, remoteness, even antagonism, deceit, exploitation, and physical or sexual abuse (Balague, 1999; Brackenridge, 2001; Jowett, 2003).

Research claims that the coach has an essential influence on an athlete's performance, motivation and well-being within sport (Jowett & Cockerill, 2002; Côté, et al., 1999; Lyle, 1999; Mageau, 2003). Thus, it is the coach-athlete relationship that contributes to the most growth and development of an athlete. Importantly, coaching in sport is considered to entail the teaching and instruction of technical skills and tactics (Nazarudin, et al., 2009; Pilus & Saadan, 2009; Potrac, Jones & Cushion, 2007). However, coaching must also entail elements of reciprocity, trust, and a genuine and helping nature as described by the coaching profession (Bloom, et al., 1998; Jowett & Cockerhill, 2003; Poczwardowski, Barott & Henschen, 2002).

Thus, needed competencies for elite coaches that are focusing on relational issues have earned attention in the field of sport coaching (Chelladurai & Doherty, 1998; Chelladurai & Riemer, 1998; Jowett & Cockerill, 2003). However, there is still a need for more research that is focusing on relational issues between coaches and their athletes, and how relational issues affect athletes' progress in sport (Jowett & Cockerill, 2002; Jowett & Ntoumanis, 2004; Williams, et al., 2003). This study aim to investigate how coaching competencies as described

by the CCS, relate to athletes perceived progress in sport. The following hypothesis was developed: *High level of perceived coaching competence is associated with higher satisfaction with progress in sport.*

3. Method

The data in this study was collected from 161 elite athletes from different sports such as cross country skiing, biathlon, Nordic combined, ski jumping, snowboard, bicycling, alpine skiing, BMX, orienteering, swimming, handball and taekwondo. The coaches for these athletes were gathered for an up-grading coaching course arranged by the Norwegian Olympic Committee together with the Norwegian University of Science and Technology (NTNU). The program was aimed at elite coaches who were working with national elite athletes in Norway. The coaches' athletes were asked to voluntarily evaluate their coaches who participated at the coaching course, and the data collection was completed before the course started. Two hundred and fifty five athletes were asked to participate in the investigation and 161 completed the data collection. The average age among the coaches was 35.5 years (the youngest 23 and the oldest 53), and among the athletes 20 years age old (the youngest 14 and the oldest 41). There were 60 females and 101 males participating in the study.

3.1 The Coach Competence Scale

The coaching Competence Scale (CCS) was developed based on core competencies for coaches as defined by the coaching profession (Moen & Federici, 2011, 2012a). The CCS consists of five dimensions with three different numbers of items on each subscale. The dimensions are: (1) Creating the relationship, (2) communication-attending skills, (3) communication- influencing skills, (4) facilitating for learning and results, and (5) making the responsibility clear. It is important to note that the instrument primarily was designed to measure the coachee's perception of a coach's competencies based on his or her experiences from a coaching relationship.

The athletes were asked to consider different statements regarding their coaches, and how true they were on a 7-point scale ranging from "Not at all" (1) to "Absolutely" (7). Creating the relationship consisted of three items with a Cronbach's alpha of .77. An example of an item is: "My coach expresses a fundamental thrust and respect in me". The second dimension focused on communication- attending skills. This dimensions consisted of three items with a Cronbach's alpha of .85. An example of item is: "My coach seems to understand me well when we speak together". Communication- influencing skills consisted of three items. An example of item is: "My coach asks mainly open and direct questions". The Cronbach's alpha for this dimension was .78. Facilitating for learning and results consisted of three items with a Cronbach's alpha of .86. An example of item is: "My coach brings out my solutions on challenges that I meet". The last dimension was making the responsibility clear. This dimensions consisted of three items. An example of an item is: "My coach puts a clear responsible on me in my learning process". This dimensions had a Cronbach's alpha of .71.

Moen and Federici (2011) found support both for the five dimensions as well for a strong second-order factor underlying the five dimensions. The CCS was also validated through an inspection of its relation to need satisfaction (self-determination theory). Using structural equation modelling (SEM) the analysis revealed that overall coach competencies predicted need satisfaction with a standardized estimate of .69, $p < .001$ (Moen & Federici, 2011, 2012a).

3.2 Perceived Satisfaction with Progress within Sport

Performances in sport are often measured as results in different competitions. However, such measurements are contaminated by different variables such as random chance and opponent's outstanding performance (Courneya & Chelladurai, 1991). The use of athletes' satisfaction with their own performances is a way to avoid this pitfall (Chelladurai & Riemer, 1997). However, it might be difficult to separate these two variables because of the athletes' affective reactions regarding their actual performance (Chelladurai & Riemer, 1998). In this study we chose to use athletes' satisfaction with their own progress in sport during the last year as an outcome variable. This was done to avoid short-term affective reactions regarding results in competitions, and to include experienced progress in daily training sessions.

The athletes were asked to consider how satisfied they were with their own progress in sport during the last year on a 7-point scale. The levels of perceived satisfaction with progress in sport are ranging from: Level 1) Extremely dissatisfied, Level 2) Very dissatisfied, Level 3) Dissatisfied, Level 4) Either…or, Level 5) Satisfied, Level 6) Very satisfied, Level 7) Extremely satisfied.

3.3 Data Analysis

Initial analyses consisted of a confirmatory factor analysis (CFA) to ascertain empirical support for the five theoretical dimensions of the CCS. When conducting CFA, the analysis produces an estimated population

covariance matrix based on the model specified. A key element is to assess whether the model produces an estimated matrix that is consistent with the sample matrix (Tabachnick & Fidell, 2007). This consistency is investigated through different measurement indices of goodness of fit. If goodness of fit is adequate it supports the plausibility of the model specified. Different measures of fit are available and are assessed through indices such as CFI, IFI, TLI and RMSEA, as well as the Chi square test-statistics. For the CFI, IFI and TLI indices, values greater than .90 are typically considered acceptable and values greater than .95 indicate a good fit to data (Byrne, 2010; Hu & Bentler, 1999). For well specified models, an RMSEA of .06 or less indicates a good fit (Hu & Bentler, 1999).

The confirmatory factor analysis of the CCS indicated that the model did not fit data (χ^2(80,N = 161) = 242,587, p <.001, CMIN/DF=3.032,RMSEA = 0,113 IFI = 0.903, TLI = 0.871, and CFI = 0.902). This somewhat surprising result may be due to the fact that the sample size does not meet the minimum requirements for conducting such analyses (Pallant, 2010; Gall & Borg, 2007). Moreover, the correlation matrix indicates that the result from the CFA may be due to multicollinearity (see Table 1). Since previous validation studies shows a satisfactory functionality of the instrument (e.g., Moen & Federici, 2011, 2012a), further analyses were conducted based on the dimensions found in previous studies. However, we acknowledge the need to cross-validate the instrument with larger samples to investigate population equivalence in future research.

Based on the results from the initial analysis further analyses was conducted by means of descriptive statistics and one-way between groups analysis of variance (ANOVA) using the SPSS 20 software. ANOVA was employed to investigate whether the means between the different groups (levels of athletes' satisfaction 1-7) were equal or not. In general, when conducting ANOVA the observed variance in a particular variable is partitioned into components attributable to different sources of variation. ANOVA conducts a statistical test of whether or not the means of several groups are all equal, and therefore generalizes the t-test to more than two groups (Pallant, 2010; Gall & Borg, 2007). Since ANOVA is useful when comparing three or more means, this analytic approach was chosen to explore our research questions.

4. Results

Table 1 shows correlations between the study variables as well as the number of items for each dimension of the CCS, statistical means, standard deviations, and the Cronbach's alphas.

Table 1. Correlations between the variables and descriptive statistics

Variable	1	2	3	4	5
CCS					
1. Creating the relationship	-	.77**	.83**	.69**	.67**
2. Communication- attending skills		-	.69**	.76**	.65**
3. Communication- influencing skills			-	.76**	.70**
4. Facilitating for learning and results				-	.71**
5. Making the responsibility clear					-
Number of items	3	3	3	3	3
Mean	5.92	6.10	5.80	5.89	5.99
Standard deviation	.92	.97	.85	.94	.80
Cronbach's alpha	.77	.85	.78	.86	.71

Note. **Correlations are significant at $p < .001$, N=161.

The zero order correlations between the study variables vary from moderate to strong. All variables had satisfactory Cronbach's alphas. The mean values are high for the different dimensions (7 is the maximal score), with Communication attending skills as the dimension with the highest mean score. The strongest correlation is between Creating the relationship and Communication skills (attending and influencing skills), with a coefficient of .77 and .83, respectively

Table 2 shows the means and standard deviations of the different dimensions of the CCS, sorted by the different levels of athletes' satisfaction with their progress in sport during the last year.

Table 2. The dimensions of CCS and each level of satisfaction

		N	Mean CCS	SE CCS
Creating the relationship	Very dissatisfied	5	6.13	.69
	Dissatisfied	8	4.80	.94
	Either	8	5.33	.82
	Satisfied	42	5.52	.84
	Very satisfied	59	6.03	.61
	Extremely satisfied	39	6.50	.56
Communication-attending skills	Very dissatisfied	5	5.40	1.09
	Dissatisfied	8	4.58	1.56
	Either	8	5.00	1.20
	Satisfied	42	5.73	.90
	Very satisfied	59	6.32	.63
	Extremely satisfied	39	6.79	.38
Communication-influencing skills	Very dissatisfied	5	5.80	.77
	Dissatisfied	8	4.83	1.05
	Either	8	5.12	.91
	Satisfied	42	5.41	.84
	Very satisfied	59	5.89	.66
	Extremely satisfied	39	6.42	.56
Facilitating for learning and results	Very dissatisfied	5	5.60	.83
	Dissatisfied	8	4.46	1.34
	Either	8	5.08	.77
	Satisfied	42	5.37	1.00
	Very satisfied	59	6.14	.54
	Extremely satisfied	39	6.55	.56
Making the responsibility clear	Very dissatisfied	5	6.20	.38
	Dissatisfied	8	4.83	1.02
	Either	8	5.04	.92
	Satisfied	42	5.68	.71
	Very satisfied	59	6.18	.59
	Extremely satisfied	39	6.44	.66

Note. None of the athletes were *extremely dissatisfied* with their progress.

The majority of the athletes are satisfied, very satisfied or extremely satisfied with their own progress (N= 42, 59 and 39, respectively). Interestingly, there seems to be a trend that higher satisfaction with own progress in sport is associated with higher scores on the different dimensions of the CCS. However, this trend does not apply for the athletes who are very dissatisfied with own progress in sport. These athletes actually seem to score their coaches higher compared to the athletes within their nearby levels.

The ANOVA analysis was conducted to explore possible significant differences between the groups in their mean scores on the CCS. The groups were based on their level of satisfaction with progress within sport (as in Table 2). The results are presented in Table 3.

Table 3. Summary of ANOVA

CCS		Sum of Squares	df	Mean Square	F
Creating the relationship	Between Groups	33.07	5	6.61	13.64**
	Within Groups	75.16	155	0.49	
	Total	108.23	160		
Communication-attending skills	Between Groups	57.41	5	11.48	19.01**
	Within Groups	93.62	155	0.60	
	Total	151.03	160		
Communication-influencing skills	Between Groups	32.86	5	6.57	12.44**
	Within Groups	81.89	155	0.53	
	Total	114.75	160		
Facilitating for learning and results	Between Groups	53.81	5	10.76	18.77**
	Within Groups	88.89	155	0.57	
	Total	142.69	160		
Making the responsibility clear	Between Groups	32.20	5	6.44	14.12**
	Within Groups	70.67	155	0.46	
	Total	102.86	160		

Note. **p < 0.01

The results of the analysis indicate that there are statistically significant differences at the $p < .001$ level between the mean scores on all of the dimensions of CCS. In order to gain a clearer picture of which groups that differ multiple comparisons post-hoc tests were conducted. The Tukey HSD test was chosen to explore which levels of satisfaction with progress within sport that differed from each other. The results of the post-hoc tests are presented in Table 4.

Table 4. Tukey HSD Comparison of Coaching competence and perceived level of satisfaction

				95% CI	
CCS	Comparisons	Mean Difference	SE	Lower Bound	Upper Bound
Creating the relationship	Level 2 vs. Level 3	1.34*	0.40	0.20	2.49
	Level 3 vs. Level 6	-1,24**	0.26	-2.00	-0.49
	Level 3 vs. Level 7	-1,70**	0.27	-2.48	-0.92
	Level 4 vs. Level 7	-1.15**	0.27	-1.93	-0.37
	Level 5 vs. Level 6	-0.51**	0.14	-0.92	-0.10
	Level 5 vs. Level 7	-0.96**	0.16	-1.41	-0.52

Communication-attending skills	Level 2 vs. Level 7	-1.39**	0.37	-2.45	-0.32
	Level 3 vs. Level 5	-1.15**	0.30	-2.01	-0.28
	Level 3 vs. Level 6	-1.73**	0.29	-2.16	-0.47
	Level 3 vs. Level 7	-2.20**	0.30	-3.07	-1.33
	Level 4 vs. Level 6	-1.32**	0.29	-2.16	-0.47
	Level 4 vs. Level 7	-1.79**	0.30	-2.66	-0.92
	Level 5 vs. Level 6	-0.59**	0.29	-2.16	-0.47
	Level 5 vs. Level 7	-1.06**	0.17	-1.55	-0.56
Communication-influencing skills	Level 3 vs. Level 6	-1.06**	0.27	-1.85	-0.27
	Level 3 vs. Level 7	-1.59**	0.28	-2.40	-0.77
	Level 5 vs. Level 6	-0.48*	0.15	-0.90	-0.06
	Level 5 vs. Level 7	-1.01**	0.16	-1.47	-0.54
	Level 6 vs. Level 7	-0.53**	0.15	-0.96	-0.09
Facilitating for learning and results	Level 3 vs. Level 5	-0.92*	0.29	-1.76	-0.07
	Level 3 vs. Level 6	-1.68**	0.29	-2.51	-0.86
	Level 3 vs. Level 7	-2.09**	0.29	-2.94	-1.24
	Level 4 vs. Level 6	-1.06**	0.29	-2.31	-0.62
	Level 4 vs. Level 7	-1.46**	0.29	-2.31	-0.62
	Level 5 vs. Level 6	-0.77**	0.15	-1.21	-0.33
	Level 4 vs. Level 7	-1.17**	0.17	-1.66	-0.69
Making the responsibility clear	Level 2 vs. Level 3	1.37**	0.39	0.26	2.48
	Level 2 vs. Level 4	1.16*	0.39	0.05	2.27
	Level 3 vs. Level 4	-0.84*	0.26	-1.59	-0.09
	Level 3 vs. Level 5	-1.35**	0.25	-2.08	-0.61
	Level 3 vs. Level 6	-1.60**	0.26	-2.36	-0.85
	Level 3 vs. Level 7	-1.16*	0.39	-2.27	-0.05
	Level 4 vs. Level 6	-1.14**	0.25	-1.87	-0.41
	Level 4 vs. Level 7	-1.40**	0.26	-2.15	-0.64
	Level 5 vs. Level 6	-0.51**	0.14	-0.90	-0.11
	Level 5 vs. Level 7	-0.76**	0.15	-1.19	-0.33

Note. * $p < 0.05$, ** $p < 0.01$. Only group with significant differences are shown.

Table 4 shows that there are significant differences among several of the levels of satisfaction with progress within sport at the $p < .01$ level and the $p < .05$ level. In general, the results indicate that lower levels differ significantly from the higher levels. A trend is that the lower levels of perceived satisfaction have a mean value that is significantly lower than the higher levels. However, this trend is not true for the athletes who are very dissatisfied with their progress in sport.

5. Discussion

Researchers claim that the development of individual capacities in sport is influenced by coaches' relational

capabilities (Côté & Gilbert, 2009; Jones, 2006; Jowett, 2007). However, there is still a need to investigate to what degree relational issues affect athletes' progress in sport (Jowett & Cockerill, 2002; Jowett & Ntoumanis, 2004; Williams, et al., 2003). The main purpose of this study was to explore whether higher levels of perceived coaching competencies focusing on relational issues, were associated with higher satisfaction among elite athletes with their progress in sport. In order to explore this, we investigated elite athletes' perceptions of their coaches' coaching competence (CCS) and how these perceptions related to their own satisfaction with their progress in sport during the last year.

Our hypothesis was partly confirmed as the results revealed that higher perceived coach competencies were associated with higher athlete satisfaction with their progress in sport (see Table 4). This result applies for all the five dimensions of the CCS. However, the group of athletes who are most dissatisfied with their progress in sport (Level 2) do not follow this trend, as they in general score higher on the different dimensions of the CCS compared to the nearby levels (Table 2 and 4).

The CCS was developed to measure core competencies for coaches as defined by the coaching profession (Moen & Federici, 2011). The core competencies are focusing on relational issues such as trust and respect (Creating the relationship), the ability to listen (Communication-attending skills), to ask powerful questions (Communication-influencing skills), to facilitate the learning process for an athlete (Facilitate learning and results), and to make the responsibility clear in his or her learning process (Make the responsibility clear). Thus, this result indicates that these relational issues influence the athletes' satisfaction with their progress in sport.

Interestingly, the CCS dimension with the highest mean score was the athletes' perceptions of their coaches' attending skills (Table 1). This confirms a previous study that concluded that attending behaviour is found to be important in order to motivate athletes to promote a long-term commitment to become expert athletes (Young & Medic, 2008). Attending skills are also claimed to be especially important in order to establish a relationship based on mutuality (Ivey et al., 2012). Relationships based on mutuality are described as the optimal relationship between coaches and their athletes in sport (Jowett, 2007). In sport research, the 3+1Cs model captures the specific interdependence structures in which coaches and athletes cause one another to experience good versus poor outcomes (Jowett, 2007). The coaching profession also claims that mutuality is the optimal relationship in coaching relationships (Moen, 2010). Thus, the CCS and the different dimensions should be a good predictor for relationships built on mutuality (Moen & Federici, 2011). These results indicate that attending behaviour is one of several important relationship issues in order to build successful relationships between coaches and their athletes.

The results might indicate that if the coaches attempt to cooperate with their athletes by actively involving them, showing them respect and act in a trustful manner with both actively listening- and influencing skills so that learning is facilitated, this will ensure a positive outcome of the relationship that is created. This is in accordance with the 3+1 Cs model (Jowett, 2007). The 3+1 Cs model claims that athletes must be met by their coaches with trust and respect, commitment, and a cooperative attitude (i.e., high levels of closeness, commitment, complementarity and co-orientation) in order for them to achieve progress within their sport (Jowett, 2007, 2005b; Lafrenière , et al., 2008; Lorimer & Jowett, 2009; Olympiou, Jowett, & Duda, 2008). Thus, the CCS and the 3+1 Cs model seem to share important similarities.

Interestingly, the athletes who are most dissatisfied with their progress in sport do not follow this trend. Thus, the athletes who are very dissatisfied with their progress in sport score their coaches higher on all the dimensions of the CCS, compared to the athletes who are dissatisfied, either or satisfied, and satisfied (Table 2). However, only the dimensions *communication-attention skills*, and *making the responsibility clear* are significantly higher among the athletes who are very dissatisfied with their progress in sport compared to those who are dissatisfied (Table 4). A possible explanation might be that these athletes are learned helpless, and take personal responsibility for their lack of progress in sport (Coffee, Rees, & Haslam, 2009). However, this is only speculations and needs to be further explored in future studies.

These findings are worth noting also in the context of educational and developmental psychology because the results indicate that relational issues as described in the CCS are important in order to achieve development in others. Importantly, the CCS is highly influenced by the humanistic psychology development, which emphasizes the importance of the consultant's relational qualities (Kahn, 1996). The results give reason to consider if these core competencies (CCS) might be important also in the context of education and development. However, this must be investigated in future research.

6. Conclusion

Coaching competencies that are focusing on relationship issues such as trust and respect, attending behaviour,

powerful questioning, active involvement and facilitating for learning and results, and being clear about the athlete's responsibility in the learning process, seem to be important in order to build successful relationships between coaches and athletes in sport. Thus, the results in this study show that the athletes who are more satisfied with their own progress in sport in general score their coaches higher on these different dimensions.

The potential effect of coaching on athletes' progress will benefit from further research. The present study contributes to coaching research in sports and extends the literature of empirical research regarding this matter. However, the present study has several limitations. Sample size may have influenced the results. Studies with larger number of participants are therefore called for in future research, as well as a more solid and causal design. Moreover, one should note that the collected data is constituted by self-reporting measures and one do not know to which extent these self-reports accurately reflect the variables under study. Conducting studies that combine self-reported data with data obtained in a more objective manner could further develop the line of research. For instance, by longitudinal studies that incorporates both quantitative and qualitative methods in order to investigate possible cause and effect relationships. Such studies should also link coaching to a measure of coachees' actual performance or effectiveness. The CCS instrument should also be cross-validated in different populations in future research.

How coaching competencies interplay in the context of educational and developmental psychology should also be investigated further in future research.

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