

THE INFLUENCE OF COACHES' LEADERSHIP STYLE ON SELF-ESTEEM AND SPORT MOTIVATION IN ADOLESCENT ATHLETES L'INFLUENZA DELLO STILE DI LEADERSHIP SULL'AUTOSTIMA E MOTIVAZIONE ALLO SPORT DI ATLETI ADOLESCENTI

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Abstract

The study investigates the relationship between coaches' leadership styles and the level of self-esteem and sport motivation in adolescent athletes in a sample of adolescent athletes (n=85 considering different sports) and their coaches (n=10). Previous literature about the youth population suggests that contextual factors can have an important influence on the effects of the sport, e.g. the relations with adults and peers (Brustad, Babkes & Smith, 2001) or the sports program one takes part to (Whitehead & Corbin, 1997). In this research, the coaches' leadership style was taken into consideration because it has an important influence on athletes' self-perceptions (Coatsworth & Conroy, 2009). Scientific studies demonstrate that a more supportive, nurturing and encouraging leadership behaviour produce greater changes in youth's self-esteem (Coatsworth & Conroy, 2006; Smith & Smoll, 1996). Additional evidence showed how the coach's behaviour influence athletes' motivation (Amorose & Anderson-Butcher, 2007; Gagné, Ryan & Bargmann, 2003). The results of the data analysis showed a strong positive correlation between athletes' self-esteem and coach's Training & Instruction behaviour and a negative relationship between self-esteem and lack of motivation in athletes. Besides, from a larger sample of coaches (n = 49) the relationship between the coach's leadership behaviour and his own level of self-esteem was investigated (Rosenberg SES, Prezza et al., 1997). The results highlighted higher levels of Training & Instruction, Autocratic, Social Support and Positive Feedback behaviours in coaches with an average level of self-esteem compared to those with low levels.

Lo studio indaga la relazione tra lo stile di leadership degli allenatori e il livello di autostima e motivazione sportiva di atleti adolescenti. Lo studio è stato effettuato su un campione di atleti adolescenti (n = 85) di diverse discipline sportive e sui loro allenatori (n = 10). Alcune ricerche suggeriscono che alcuni fattori contestuali possono avere un'influenza importante sugli effetti che lo sport ha sui giovani, ad esempio le relazioni con adulti e coetanei (Brustad, Babkes & Smith, 2001) o il tipo di sport praticato (Whitehead & Corbin, 1997). In particolare, lo stile di leadership degli allenatori può avere un'influenza importante sulla percezione di sé degli atleti (Coatsworth & Conroy, 2009). La letteratura scientifica dimostra che uno stile più solidale, supportivo e incoraggiante produce cambiamenti positivi nell'autostima dei giovani (Coatsworth e Conroy, 2006; Smith & Smoll, 1996). È stato, inoltre, dimostrato che il comportamento dell'allenatore influenza anche la motivazione degli atleti (Amorose & Anderson-Butcher, 2007; Gagné, Ryan & Bargmann, 2003). L'analisi dei dati del nostro studio mostra una forte correlazione positiva tra l'autostima degli atleti e il comportamento di Training & Instruction dell'allenatore e una relazione inversa tra autostima e mancanza di motivazione negli atleti. Inoltre, da un campione più ampio di allenatori (49), abbiamo studiato

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la relazione tra il comportamento di leadership del coach e il suo livello di autostima (Rosenberg SES, Prezza et al., 1997). I risultati evidenziano livelli più elevati di comportamenti di Training & Instruction, Autocratico, Supporto Sociale e Feedback Positivi negli allenatori con un livello medio di autostima rispetto a quelli con livelli bassi.

Keywords

Self-esteem, leadership style, adolescence, sport motivation, coach

Autostima, stile di leadership, adolescenza, motivazione allo sport, allenatore

Introduction

The study takes into consideration the relationship between the coaches and their athletes, in a particular age group, the adolescence. In this age, individuals try to assert their personality and find their place in the world, treasuring the experiences and skills acquired in their daily life. In this phase of affirmation, the stimuli and influences received from the context play a decisive role. Relationships with significant adults and peers influence one's worldview and may or may not support a balanced development in people. Among significant adults, we consider it appropriate to include coaches, as many young people, especially athletes, begin to play sports and, therefore, to forge relationships with their coach at a young age (Bloemhof, 2008). According to Devine, Meyers and Houssemard (2013), the coach has a great influence on student-athlete. Literature demonstrate that coach's leadership style influences the athletes' self-perception (Coatsworth et al., 2009) as a supportive and encouraging coach's style has a positive impact on athletes' self-esteem. A positive influence has been demonstrated between coaches' behaviours and burn out syndrome (Gillet, Vallerand, Amoura, & Baldes, 2010) as well as pleasant and unpleasant emotions in athletes during competitions (González-García, Martinent, & Trinidad Morales, 2019).

We decided to focus our investigation on the self-esteem of athletes that has an important role in the psychological well-being and it is strategic to respond in a functional way to society. High self-esteem is associated with satisfying interpersonal relationships, such as safety and closeness (Murray, 2005), appropriate coping strategies (Birndorf, Ryan, Auinger & Aten, 2005). On the contrary, low self-esteem is linked to depression and anxiety disorders (Liu, Wang & Zhou, 2014; Michalak, Teismann, Heidenreich & Strohle, 2011), to a sense of loneliness (Vanhalst, Lukx, Scycholte, Engels & Goossnes, 2013) and to disorders in nutrition (De la Rie, Noordenbos, Donker & Van Furth, 2007). Lots of scientific research state that sport context promotes a balanced development of psychological, social, and physical indicators and is a preventive factor against individual and social problems (school dropout, abuse of substances harmful to health) (De Albuquerque et al., 2021; Bruner et al., 2017; Vella et al., 2013; Lerma-Cabrera et al., 2015). The role of adults (coaches and teachers) on the pedagogical organization of learning environments is fundamental in addressing a good development of young athletes through sport (De Albuquerque et al., 2021; Côté and Hancock, 2016).

Coaches' leadership behaviours can be an important factor to foster self-esteem in athletes. Despite the large number of studies on youth development and sport participation or self-esteem, little is known, specifically, about the effects of coaches' pedagogical and psychological behaviour (De Albuquerque, 2021; Cronin and Allen, 2018; Vella et al., 2013). The current study addressed this issue by analyzing the extent to which coaches' leadership behaviour was related to self-esteem and motivation in sports of young athletes.

1. The Coaches' Leadership Behaviour: a multidimensional model

From a theoretical point of view, leadership in sports environments is discussed with relational and context-based approaches. Weinberg and Gould (2016) state that in leadership studies it is important to focus both on individual leadership traits and environmental influences. In our study, the Chelladurai and Saleh (1980) coach's multidimensional leadership model was

chosen. This model has been used in a large number of research assessing sport contexts and different sports (González-García et al., 2020).

According to Chelladurai (1999), leadership is the “behavioural process aimed at influencing members to work toward achieving the group’s goals” (p. 160) and it is considered a significant process for the efficacy of athletes in sports, both individual and team. Coaches have both technical and interpersonal roles with the aim to maximize athletes’ performances. As Fletcher & Roberts (2013) say, they are supposed to support and motivate athletes as well as to become aware of their personal strengths and constraints to boost performance. In order to have a real and concrete measure of effective leadership it is necessary to consider 3 elements: 1) the behaviours displayed by the leaders, 2) the preferences of the athletes, 3) the demands of the situation. In order to be effective, leaders have to exercise flexibility and adaptation to situational characteristics, to comply with athletes’ preferred behaviours (Fiedler, 2002; Chelladurai & Carron, 1978).

Furthermore, Chelladurai says that an effective transformational leadership is when the following three variables are well combined:

- situational characteristics, such as gender, age, skills’ level, goals, context, etc.
- coach/leader’s characteristics, such as self-esteem, personality, attitudes, expertise etc.
- athlete’s characteristics, such as personality and tasks ability.

These three elements have to be considered by the coach in order to have a leadership behaviour that supports athletes’ satisfaction and their high performance. The preferred behaviour by the athletes, together with the required behaviour by the context have to be mixed with coach’s characteristics to generate the most effective leadership behaviour according to situation. The model identifies five styles of coaching behaviours (Chelladurai & Saleh, 1980; Evangelho Hernandez & Voser, 2012):

- Training and instruction (TI): aimed at improving the athletes’ performance by training and instructing athletes in techniques and tactics, organizing and fixing the athletes activities;
- Democratic behaviour (DB): coach allows athletes participate in decisions about goals, methods, tactics and strategies;
- Autocratic behaviour (AB): coach makes decision by himself without involving athletes but stressing personal authority;
- Social support (SS): coach is interested and concerned for the wellbeing of athletes’, their motivation and relationships;
- Positive Feedback (PF): coach tends to reinforce the athletes’ perception, rewarding and recognizing good performance.

All these behaviours can be effective, it depends on the context and relations, so it is fundamental that coaches are aware of their usual behaviour and of the possibility to act different behaviours according to the needs of the athletes and the situations. The flexibility to assume a different leadership style is one of the most important skill for a coach, in particular when he/she interact with adolescents which may be at a different stage of development despite having the same age.

2. Interactions between coaches’ leadership styles and athletes’ self-esteem and motivation to sport

Self-esteem is crucial for a balanced development in childhood and adolescence and, at the same time, it grows during adolescence. High levels of self-esteem are associated with satisfactory interpersonal relationships, such as security and closeness (Murray, 2005), definition of life goals and mental health (Dunham, Baron & Banaji, 2007). There’s a large number of studies testifying that self-esteem is correlated to performance in sports (Liu, Wang, Zou & Li, 2014) and that sport is consistently linked to the improvement of a variety of psychological and

social factors in adolescents such as improvement of mental well-being, self-esteem, school performance, relations with parents, as well as the decrease anger, anxiety and depression have been noted in teenagers who practice physical activity, also in school-aged children (Ekeland, Heian & Hagen, 2005). Furthermore, sport participation directly affects the self-esteem of a specific self-assessment area, increasing physical competence and body esteem and, indirectly, global self-esteem (Mariani, Marcolongo, Melchiori & Peluso Cassese, 2019). Although there's a wide interest in sport's impacts on self-esteem, as per our knowledge, there are few studies investigating the relationship between self-esteem and the leadership styles. Scientific literature shows that leadership behaviours like TI, DB, PF and SS foster positive outcomes by athletes, preventing the negative ones (Cruz & Kim, 2017; Ekstrand et al., 2019) and a task-oriented coping strategy (Nicolas et al., 2011; Ntoumanis, Biddle, & Haddock, 1999). On the contrary, the AB seems to generate burnout and unpleasant emotions in athletes (González-García et al., 2019) as well as disengagement-oriented coping (Nicolas et al., 2011). It has been demonstrated that an encouraging and supportive style or with technical instructions can produce an increase in self-esteem in young people (Coatsworth & Conroy, 2006; Smoll, Smith, Barnett & Everett, 1993) and coaches trained with a Coach Effectiveness Training have a positive influence in girls' self-esteem, particularly when the levels are low.

The adolescence is also the age where a healthy and active life-style is built, so it is important to foster and maintain the motivation to sport. Motivation is the energy used to act and it directs our behaviours and actions (Roberts et al., 2007). Emotions, cognitions and needs are involved in motivation (Reeve, 2006) and lots of research have investigated the relationship between leadership profile and motivation of young athletes. A supportive behaviour have been shown to influence also athletes' motivation (Amorose et al., 2007; Gagné et al., 2003; Borghi et al., 2017) even if the leaders don't practice social support, the levels of amotivation are not modified. Also the lack of PF seems to negatively affect motivation in athletes, on the contrary TI is perceived as valuable by them. Duarte et al. (2017) show that AB decreases intrinsic motivation and increases amotivation, and negatively influences the self-satisfaction about performance and relationships with coaches. Other research are in line with above and evince that TI, a rewarding behaviour and SS are most highly correlated with athletes' satisfaction and intrinsic motivation (Sari & Bayazit, 2017; Baric and Bucik, 2009; Horn, 2002; Amorose & Horn, 2001). As regards intrinsic motivation, democratic behaviour has been reported having a positive indirect influence in college team and individual athletes (Hollembeak and Amorose, 2005). It is important to mention that a meta-analysis found an overall positive relationship between autocratic behaviour and satisfaction (Kim and Cruz, 2016).

3. The influence of self-esteem in coach's leadership style

As per our knowledge, the relationship between self-esteem and leadership behavior in sport coaches has not deeply investigated. More is done in business area, where Matzel et al. (2015) state that higher levels of self-esteem are positively correlated with transformational leadership. As regards sports area, some research shows that transformational leadership style is associated to higher levels of self-esteem in athletes (Galante & Ward, 2016), while people with stable self-esteem are more confident in achieving their goals and preferably have a democratic behavior in situations of uncertainty (Schoel et al., 2011). On the contrary, an autocratic style is often associated to people with low and unstable self-esteem. Some research investigate the relation between the coach leadership behavior and the behavior perceived and/or preferred by athletes. According to Cruz et al. (2017) adolescent athletes prefer the TI, followed by PF, DB, SS and AB behaviours. Furthermore, Liukkonen & Salminen (1990) show that team sports coaches are perceived as more autocratic, less democratic and socially supportive than individual sports coaches, meanwhile Pitts et al. (2018) state that athletes playing individual sport have a greater preference for democratic behavior than athletes involved in team sports. More investigation is necessary in this area and our research aims to make a contribution, analysing the relationship existing between self-esteem of coaches and their usual leadership behavior.

4. Hypothesis

Considering the wide theoretical perspective presented, the following hypothesis were defined:

- (H1): Performance-oriented leadership behaviour and positive feedback positively influence the self-esteem of adolescent athletes;
- (H2): Motivation for sport is an intervening variable in determining the level of self-esteem of athletes;
- (H3): There is a linear relationship between the coach's level of self-esteem and his/her leadership behaviours.

5. Sample & Procedure

All participants signed the informed consent and were aware about the research aims, the privacy policy and the limited use of the dataset. Regarding minors, the legal guardians signed the informed consent, giving authorization to process data in an anonymous and aggregate way for research purpose. The online questionnaires were administered through Google Modules.

The sample of athletes consisted of 85 adolescent athletes (age $M = 14.48$, $SD = 4.53$; 35% females) more involved in individual sports (71%) than in a team sports (29%). Differently, the total sample of coaches consisted of 49 participants (age $M = 33.79$, $SD = 11.402$) mostly males (71%), while 10 coaches represented a sub-group linked to the athletes' sample (age $M = 33.40$, $SD = 9.033$) with gender distribution comparable to the more numerous sample (70% males).

6. Measures

Leadership Scale for Sport LSS (Chelladurai and Saleh, 1980). The scale identifies three aspects of sports leadership, the preference of athletes for a specific coach's behaviour (Chelladurai, 1984; Chelladurai et al., 1988; Hastie, 1995; Horne & Carron, 1985; Sherman, et al., 2000), athletes' perception of the coach's behaviour (Chelladurai & Saleh, 1980; Horne & Carron, 1985) and the coach's perception of his own behaviour (Brooks et al., 2000; Salminen & Luikkonen, 1994). It consists of 40 items divided into 5 subscales, whose items are divided into Training and Instruction (13), Democratic Behaviour (9), Autocratic Behaviour (5), Social Support (8) and Positive Feedback (5). The data presented here are related only to the data of the leadership behaviour perceived by the coach.

Rosenberg Self-esteem scale RSES (Rosenberg, 1965). It's a 10 item Likert scale with a 4-point range answer (from "strongly disagree" to "strongly agree"). It measures a person's overall evaluation of his or her worthiness as a human being (Rosenberg, 1979). The items are equally positively or negatively represented, measuring relatively positive and negative self-esteem (Sarkova et al., 2006). A higher score indicates higher self-esteem.

Multidimensional Self Concept Scale (MSCS, Bracken, 1992), is composed by 150 items (74 positive items and 76 negative ones) which is intended to assess data relating to 6 sub-scales (25 items each) of global self-concept; all domains are critical in the social emotional adjustments of youth and adolescents. The sub-scales assess: interpersonal relationships (how the young evaluates his/her social relationships with adults and peers), control over the environment (self-evaluation of the ability to manage the events of his/her life), emotionality (the ability to know how to manage emotions, especially unpleasant ones), academic success (successes and failures in the school area), family life (how relationships are perceived in the family, the degree to which one feels loved and valued), bodily experience (the relationship with one's own body, his appearance, physical and sporting abilities).

Sport Motivation Scale II (Pelletier et al., 2013) which evaluates the level of motivation of individuals towards sport, using the theoretical framework of self-determination by Deci & Ryan. The questionnaire has 18 items, divided into 6 sub-scales, with a 7-point response on the Likert scale. Motivation factors measured are intrinsic regulation (inspired solely by the interest and pleasure a person finds in an activity), integrated regulation (when a person has fully integrated the internal motivation to himself), identified regulation (the activity is still carried

out for extrinsic reasons, e.g. achieving personal goals, however, it is internally regulated and self-determined), introjected regulation (an external motivation source has been internalized), external regulation (behaviour controlled by external sources, such as material rewards or constraints imposed by others), non-regulation (neither intrinsic nor extrinsic motivation).

7. Data analysis

Initially, the full dataset was screened for missing data and unengaged response set, then the following statistical analysis were conducted using JASP software version 0.14.1 (JASP Team, 2020).

The independent samples T-test (Table 1) carried out between the leadership behaviours perceived by the athletes and those perceived by the coaches shows a good correspondence between what is implemented by the coaches and the behaviour perceived by the athletes. In fact, only one statistically significant difference was determined between the coaches' and the athletes' perception with respect to social support behaviour and rewarding behaviour / positive feedback which is greater than what is perceived by the athletes. That suggests there's a good level of awareness for coaches.

Independent Samples T-Test

	t	df	p	Mean Difference	SE Difference	Cohen's d
LSS_CALL_INDIPEN	1.892	158	0.060 ^a	1.820	0.962	0.300
LSS_CDEM_INDIPEN	-0.070	158	0.944 ^a	-0.064	0.918	-0.011
LSS_CAUT_INDIPEN	0.865	158	0.388	0.401	0.463	0.137
LSS_CSS_INDIPEN	2.091	158	0.038 ^a	1.590	0.760	0.331
LSS_CPREM_INDIPEN	5.008	158	< .001 ^a	2.636	0.526	0.793

Note. Student's t-test.

^a Levene's test is significant ($p < .05$), suggesting a violation of the equal variance assumption

Table 1 - Independent Samples T-Test on LSS sub-scales: Athletes' perception vs Coaches' perception

(H1) The relationship pattern among the variables relevant for the study was analysed in the correlation matrix (Table 2) in which a moderate positive correlation is highlighted among the level of athletes' self-esteem and the TI coach's behaviour and (less strongly but still statistically significant) with PF and AB behaviours. These results are congruent with the findings of Coatsworth & Conroy (2006) and Smith & Smoll (1996). Regarding motivation, the correlation matrix shows a medium negative relationship between self-esteem and lack of motivation (the lowest level of the scale of Deci & Ryan) and a positive relationship with intrinsic motivation (the highest level).

Furthermore, the leadership style PF has a positive medium correlation with the integrated motivation, one level before intrinsic motivation on an ordinal scale, where the subject has fully internalized motivational stimuli and they feel consonant with the self.

Variable		TMA TOT	LSS Training & Instruction	LSS Democratic	LSS Autocratic	LSS Social Support	LSS Positive Feedback	SMS-II Intrinsic	SMS-II A-motivation	SMS-II Integrated	SMS-II Identified
1. TMA TOT	Pearson's r	—									
2. LSS Training & Instruction	Pearson's r	0.463 ***	—								
3. LSS Democratic	Pearson's r	-0.131	0.132	—							
4. LSS Autocratic	Pearson's r	0.287 **	0.120	0.122	—						
5. LSS Supporto Sociale	Pearson's r	0.207	0.414 ***	0.395 ***	0.175	—					
6. LSS Feedback Positivi	Pearson's r	0.351 **	0.569 ***	0.113	0.065	0.322 **	—				
7. SMS-II INTRINSECA	Pearson's r	0.317 **	0.198	-0.323 **	0.154	0.178	0.160	—			
8. SMS-II AMOTIVAZIONE	Pearson's r	-0.381 ***	0.005	0.072	0.037	0.018	-0.096	-0.393 ***	—		
9. SMS-II INTEGRATA	Pearson's r	0.246 *	0.144	-0.055	0.178	0.173	0.285 **	0.535 ***	-0.074	—	
10. SMS-II IDENTIFICATA	Pearson's r	0.184	0.138	0.072	0.186	0.265 *	0.215 *	0.340 **	-0.041	0.610 ***	—

* p < .05, ** p < .01, *** p < .001

Conditioned on variables: Genere

Table 2 – Correlation Matrix conditioned on gender

A forward selection multiple regression was run to predict global self-esteem from gender, age, all the LSS sub-scales perceived by athletes, intrinsic motivation and amotivation. This multiple regression allows to keep in the model only the variable that gives the single best improvement to the model. After three iterations the multiple regression model statistically significantly predicted global SE, $F(4, 80) = 12.0333$, $p < .001$, adj. $R^2 = .344$. Regression coefficients and standard errors can be found in Table 3.

In this case in the best model the retained variable are only the coach's perceived behaviours TI and AB, and lack of motivation (all statistically significant $p < .001$). The effect of the latter variable is negative (therefore 1 unit increase in amotivation reduces global SE. Differently, the coach's perceived behaviours TI and AB contribute in the prediction of global SE and their effects are positive.

Coefficients						
Model		Unstandardized	Standard Error	Standardized	t	p
1	(Intercept)	484.671	5.809		83.429	< .001
2	(Intercept)	263.348	41.858		6.291	< .001
	LSS Training & Instruction	3.927	0.737	0.505	5.326	< .001
3	(Intercept)	298.221	38.221		7.803	< .001
	LSS Training & Instruction	3.811	0.661	0.490	5.768	< .001
	SMS-II A-motivation	-5.346	1.152	-0.394	-4.642	< .001
4	(Intercept)	241.619	45.626		5.296	< .001
	LSS Training & Instruction	3.741	0.647	0.481	5.781	< .001
	SMS-II Amotivation	-5.553	1.131	-0.409	-4.912	< .001
	LSS Autocratic	3.482	1.608	0.180	2.165	0.033

Note. The following covariates were considered but not included: Età, LSS DEMOCRATIC, LSS SOCIAL SUPPORT, LSS POSITIVE FEEDBACK, SMS-II INTRINSIC.

Table 3 – Multiple Linear Regression dependent variable global self-esteem of athletes

Another forward selection multiple regression was run to predict global self-esteem from gender, age, all the LSS sub-scales desired by athletes, intrinsic motivation and amotivation. This multiple regression allows to keep in the model only the variable that gives the single best improvement to the model. The second regression matrix (Table 4) takes into consideration the level of athletes' self-esteem and the desired coaches' behaviour by the athletes. It is highlighted how self-esteem is predicted by the desire to receive supportive behaviour (social support) and training & instruction from one's coach, while the lack of motivation and the desire for a democratic style are predictors of lower levels of self-esteem.

A forward selection multiple regression was run to predict global self-esteem from gender, age, all the LSS sub-scales desired by athletes, intrinsic motivation and amotivation. After four iterations the multiple regression model statistically significantly predicted global SE, $F(5, 79) = 17.219$, $p < .001$, adj. $R^2 = .491$. Regression coefficients and standard errors can be found in Table 4.

In this case in the best model the retained variable are only the coach's desired behaviours TI, SS and DS, and lack of motivation (all statistically significant for p ranging from $< .001$ to $.05$). The effect of the coach's desired behaviours TI and SS variables are positive, i.e. 1 unit increase in any of the two increases global SE. Differently, the coach's desired behaviours DS and amotivation contribute in the prediction of global SE and their effects are negative.

Coefficients		Unstandardize	Standard Error	Standardized	t	p
Model						
1	(Intercept)	484.671	5.809		83.429	< .001
2	(Intercept)	514.309	8.938		57.543	< .001
	SMS-II A-motivation	-5.598	1.356	-0.413	-4.128	< .001
3	(Intercept)	423.901	27.299		15.528	< .001
	SMS-II A-motivation	-5.624	1.274	-0.415	-4.416	< .001
	LSS Social Support (desired)	3.413	0.981	0.327	3.480	< .001
4	(Intercept)	439.857	27.594		15.941	< .001
	SMS-II A-motivation	-5.341	1.250	-0.394	-4.273	< .001
	LSS Social Support (desired)	4.783	1.137	0.458	4.208	< .001
	LSS Democratic (desired)	-1.985	0.887	-0.244	-2.237	0.028
5	(Intercept)	377.092	41.386		9.111	< .001
	SMS-II A-motivation	-5.426	1.228	-0.400	-4.418	< .001
	LSS Social Support (desired)	3.568	1.270	0.342	2.810	0.006
	LSS Democratic (desired)	-2.031	0.871	-0.250	-2.330	0.022
	LSS Training & Instruction (desired)	1.755	0.875	0.217	2.006	0.048

Note. The following covariates were considered but not included: Età, LSS desired Autocratic behavior, LSS C desired Positive Feedback Behavior, SMS-II intrinsic.

Table 4 – Regression Matrix self-esteem of athletes and desired coaches' behaviour

As concerns the largest sample of coaches, few independent samples T-test (see Table 5), were carried out using a dichotomous variable of coach self-esteem (low/high) as grouping variable. The comparisons of all the Leadership behaviours sub-scales showed some statistically significant differences, in particular the parameters of coaches with high level of self-esteem were higher for LSS Training & Instruction, Autocratic, Social Support and Positive Feedback behaviours were higher than coaches' one with low self-esteem.

Independent Samples T-Test

	t	df	p	Cohen's d
LSS_CALL_ALL	-2.642	71.754	0.010	-0.575
LSS_CDEM_AL L	0.569	62.448	0.571	0.130
LSS_CAUT_ALL	-9.580	36.249	< .001	-2.475
LSS_CSS_ALL	-2.520	66.046	0.014	-0.567
LSS_CPREM_A LL	-3.461	61.185	< .001	-0.795

Note. Welch's t-test.

Table 5 - Independent Samples T-Test: Coaches with high and low levels of self-esteem and leadership behaviours

Lastly, the correlation matrix between self-esteem in coaches and their leadership behaviours shows a positive relationship between self-esteem levels and the Autocratic style, Positive Feedback and Training and Instruction (see Table 6). These moderate positive correlations can be considered as evidence to support the theoretical predicted relationship among self-esteem and leadership behaviours of the three subscales.

Correlation

Pearson's Correlations

Variable		LSS T&I Coach	LSS Democratic Coach	LSS Autocratic Coach	LSS Social Support Coach	LSS Positive Feedback Coach	Self Esteem Coach
1. LSS Training & Instruction Coach	Pearson's r	—					
2. LSS Democratic Coach	Pearson's r	-0.239 *	—				
3. LSS Autocratic Coach	Pearson's r	0.302 **	-0.586 ***	—			
4. LSS Social Support Coach	Pearson's r	0.805 ***	-0.075	0.220	—		
5. LSS Positive Feedback Coach	Pearson's r	0.732 ***	0.283 *	0.060	0.614 ***	—	
6. Self Esteem Coach	Pearson's r	0.468 ***	-0.165	0.695 ***	0.241 *	0.562 ***	—

* p < .05, ** p < .01, *** p < .001

Table 6 - Independent Samples T-Test: Coaches with high and low levels of self-esteem and leadership behaviours

8. Discussion

Firstly, results presented no substantial difference between the coaches' perceived behaviours and the athletes' perceived ones, except for social support and behaviour with positive feedback for which the coach seems to demonstrate it more than is perceived.

Athletes' self-esteem is positively correlated with a leadership style focused on technical instructions and performance, positive feedback and autocratic behaviour. The coach's Training & Instruction and Autocratic behaviours seem to predict a higher level of self-esteem.

This data is also confirmed by the analysis of athletes' desires, where styles oriented towards social support and training & instruction are predictive of higher levels of self-esteem.

Leadership style with positive feedback appears to be positively correlated with increased sport motivation (integrated motivation). The lack of motivation (a-motivation) explains the

lower levels of self-esteem. Leadership behaviours characterized by positive feedback are in a significant positive relationship with the defined integrated motivation, where the subject has learned to integrate motivational stimuli within himself. Our results are in line with what reported by Borghi et al. (2017) which highlight how athletes coordinated by coaches who present a social support leadership style have a higher intrinsic motivation. And with coaches who do not give feedback, athletes tend to feel unmotivated, on the contrary, if they are used to giving instructions and reinforcement on their performance, they feel valuable to their development.

We can confirm our hypotheses according to which:

- (H1) the athletes' self-esteem is positively correlated with a leadership style focused on technical instructions and on performance and positive feedback. In particular, T&I seems to predict higher self-esteem in athletes;
- (H2) motivation for sport is an intervening variable in determining the level of self-esteem of athletes;
- (H3) the coach's level of self-esteem influences their leadership style, preferring some behaviours over others.

As we have seen previously, however, it is important for coaches to develop all leadership styles in order to better deal with the different environmental situations that arise and adapt their style to the athletes and context. In particular, with adolescent athletes, still in training, it is important to be able to adapt one's style to what is necessary for the individual.

The results suggest that average levels of self-esteem may not be sufficient to flexibly engage in leadership behaviours that expose one's view of oneself to confrontation and potentially adverse or critical external inputs.

9. The proposed intervention

The information received from the analysis of the data of our survey, even if with the limitations below discussed, together with what has been extrapolated from the literature, corroborate our decision regarding the proposal of psycho-educational intervention. Literature demonstrates that transformational leadership training programs for youth sport coaches have a positive impact on athletes' perception and development (Vella et al., 2013; Smoll et al., 2009; Smith et al., 1997), besides self-esteem (Smoll et al., 1993). The goals in youth sports have different priorities compared with sports in adulthood. Even if the high performance is one of the goals, it's not the most important. Education and balanced growth are of greater importance.

According to Vella et al. (2013) a transformational leadership training program for youth sport coaches needs to have some important transformational components:

- role modelling (be a positive behavioural model)
- intellectual stimulation (challenging and goal setting)
- individual assessment (in terms of performance level and individual needs for growth)
- inspirational motivation (stimulating intrinsic motivation)
- collaborative approach (social skills)
- feedback and rewarding (positive reinforcement).

Smoll & Smith (2009) in their Mastery Approach to Coaching emphasize the importance of coaches' self-awareness and positive approach, besides other competencies, to foster a transformational leadership style. Furthermore, training on mindfulness skills can help coaches to enhance coach-athlete interactions, thanks to the positive impacts on anxiety and adverse emotions (Longshore et al., 2015).

Our psycho-educational program aims to develop and/or enhance the transformational leadership competencies and mindfulness ones. It is constituted by 6 group sessions of 2 hours duration. Each group session is planned to reflect a transformational leadership approach, according to Smoll & Smith (2009) that demonstrate the efficacy in facilitating positive development in youth athletes (Smith et al. 2007; Smith & Smoll, 1993) but also an acceptance and

mindful behaviour that can be the base for a positive and constructive approach. The topics of the training sessions are:

- goal setting
- self-esteem and self-efficacy: how to stimulate
- feedback and rewarding on performance and behaviour
- emotional intelligence and social behaviour
- self-determination and motivation.

Each group session starts and ends with mindfulness milestones and practices and includes three fundamental steps:

1. theoretical framework on skills necessary for a transformational leadership
2. classroom activities on the competence covered in the session
3. elements of Mindfulness.

An important part of the session is dedicated to the call to action and the reflective learning on what experienced in time between the sessions.

The training program is followed by monthly follow up video group sessions for the duration of the sporting season managed by the researcher to monitor advances, obstacles and to share experiences.

Conclusions

The present study has some limitations that should be pointed out. They are mainly concerning a non-randomized sampling and the presence of some questionnaires not validated in Italy. The data that emerged will be used to support the development of educational programs for the coaches. They have a transformative effect on young athletes and it is important for them to have knowledge and be trained on different approaches to leadership in order to support motivation in sport and promote self-esteem for balanced growth of their young athletes. When the coach is in charge of adolescent athletes, greater flexibility in style is needed, as adolescents may need different ways of interacting, depending on their stage of development and their maturity.

In terms of future applicability, it is our intention to broaden the panel of participants (athletes and coaches) and to investigate the differences between individual and team sports both for the self-esteem of athletes and for the most effective leadership styles, isolating other variables that could intervene in the relationship. Based on actual knowledge and results, it is our intention to deliver the course to a sample of coaches to verify their effectiveness, measuring the impacts on their leadership style and on the development of trained athletes, comparing them to the data of a control group without training.

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