Transformational Leadership and Motivation in Sport: The Moderating Role of Personality and Self-other Agreement Ratings

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Sport dropout during adolescence is a common phenomenon which is connected to motivation. Therefore this thesis investigated the relationship between coaches’ ($N = 61, M_{age} = 40.39$) transformational leadership and athletes’ ($N = 132, M_{age} = 20.61$) type of motivation in Swedish sport clubs. In addition, the moderating role of personality and self-other agreement ratings were examined. A cross sectional research design was used and data was collected through self-ratings and other ratings. Data was analysed using SPSS and the add-on program Process macro. To investigate the moderating role of personality and level of agreement, coach-athletes dyads were created ($N = 38$). The result showed that transformational leadership is positively associated with more self-determined types of motivation. Four of the coach’s personality traits (i.e., honesty-humility, emotionality, extraversion and conscientiousness) moderated the relationship between transformational leadership and motivation. For the athletes agreeableness moderated this relationship. A majority of the coaches and athletes disagreed in rating the coaches’ transformational behaviours; however the result only showed significant correlation between coaches who underestimated and athletes’ lack of motivation. In conclusion, transformational leadership is suitable in a sport context. Future research could use a longitudinal design to further explore personality’s role in leadership. Practical implications of transformational leadership in connection to education are discussed.

Many studies have documented the health benefits of participating in sports (Eime, Young, Harvey, Charity, & Payne, 2013; Pate, Trost, Levin, & Dowda, 2000). Overall, participating in sport is beneficial for our physical, psychological, and social health across the lifespan (see Eime et al., 2013, for a review). Statistics have showed that a total of 71% of Swedish adolescents between the ages of 12 and 15 years old participated in a sport club at least once a week, yet between the ages of 16 and 18 this rate declined to only 56% (Statistics Sweden, 2015). This rate continues to decline with age (Eime, Harvey, Charity, Casey, Westerbeek, & Payne, 2016). For many years this has been found to be a common pattern and sport psychology researchers have identified youth sport dropout as an area of concern (Fraser-Thomas, Côté, & Deakin, 2008; Gould, Feltz, Horn, & Weiss, 1982).

A growing body of studies has attempted to investigate reasons for dropout and many highlight that motivational characteristics are influential in shaping athletes’ desire for continuation in sport (Cervelló, Murcia, Calvo, Jiménez, & Iglesias, 2010; Trondman, 2005). Motivation can be considered an inner state that energizes and drives action or behaviours and regulates its direction and persistence (Hagger & Chatzisarantis, 2007). Research on motivation has focused on factors that contribute to performance, persistence and a healthy development (Deci & Ryan, 2008). A number of studies have demonstrated that coaches’ leadership style has an impact on athlete’s motivation (Beauchamp, Barling, Morton, Keith, & Zumbo, 2010; Charbonneau, Barling, & Kelloway, 2001; Fraser-Thomas & Côté, 2006; Mageau & Vallerand, 2003; Price & Weiss, 2013; Vidic & Burton, 2011). For instance, Charbonneau et al. (2001) found that intrinsic motivation mediates the relationship between transformational leadership and performance, suggesting that coaches who exhibit more transformational behaviours promote greater intrinsic motivation in their athletes, which, in turn, leads them to perform better. Researchers have suggested that as coaches differ in their personality and leadership behaviours, they may also influence the athlete’s motivation differently depending on their personality (Barić & Bucik, 2009). Furthermore, Bono and Judge (2004) stated that understanding the personality traits associated with leadership has important implications for the selection, training, and development of leaders.

To our knowledge, the link between personality, leadership and motivation has not been examined in a sport context. The purpose of this study is to examine the relationship between transformational leadership and athletes’ motivation; investigate if coaches’ and athletes’ personality traits moderate the relationship between transformational behaviours and athletes’ motivation; and explore if discrepancy between ratings on the coaches’ leadership behaviours has a relationship with motivation.

Motivation

Historically research on motivation has had different approaches (Eccles & Wigfield, 2002). Some theories have focused on expectations, like Bandura’s (1977) self-efficacy theory, where the expectations for a certain outcome and the expectation that a person is able to perform the behaviour required for the outcome, is of interest. Other theories have focused more on why people engage in behaviours and these have looked more at different levels of intrinsic and extrinsic motivation (Eccles & Wigfield, 2002). This thesis explores motivation using Self-Determination Theory (SDT) developed by Deci and Ryan, which is a popular and widely tested theory to explain motivation in sport and other performance domains (1985, 2000).

Self-determination theory include the development of individuals’ inner resources for personality development and behavioural self-regulations (Ryan & Deci, 2000). Specifically, Deci and Ryan (1985) suggest that three distinct motivational forces can influence behaviour: intrinsic motivation, extrinsic motivation, and amotivation. These forces can be placed on a continuum. The prototype for intrinsic motivation is when people are engaged in the activity for the fun and satisfaction they get from just taking part (Ryan & Deci, 2000). Extrinsic motivation on the other hand arises from outside of the individual and is when people engage in activities because they value the outcomes associated with this. Extrinsic motivation can be divided into four types, which
also can be placed on a continuum as they differ in degree of autonomy and internalization, meaning that they can be more or less self-determined. More self-determined types of extrinsic motivation are integrated regulation (i.e., when a person has internalized new values and behaviours) and identified regulation (i.e., when a person see the importance of being able to master an activity to be able to do something else to achieve a goal). People who are driven by integrated and identified regulation act from what they perceive is their own choice. Less self-determined types of extrinsic motivation are introjected regulation (i.e., more controlled motivation because people do an activity after a bit of pressure to avoid anxiety, feelings of shame or to feel proud) and external regulation (i.e., behaviours aiming to satisfy an outside demand or to get a reward). The third type of motivation, which stands on the opposite end of the continuum of intrinsic motivation, is amotivation. Ryan and Deci (2000) described amotivation as a psychological state in which there is no motivation at all. Here individuals lack a sense of efficacy in attaining a desired outcome.

Within SDT, a mini-theory of three psychological needs (i.e., autonomy, competence, and relatedness) has been proposed. The fulfilment of these basic needs is seen as the foundation for a healthy development (Ryan & Deci 2000; Ryan, Kuhl, & Deci, 1997). The needs are seen as innate and are at the psychological level (Ryan & Deci, 2000). When the needs are satisfied, intrinsic motivation, integrated regulation and identified regulation (i.e., more self-determined types of motivation) are enhanced and people get more satisfied and experience a higher level of well-being (Ryan & Deci, 2000).

Ryan, Williams, Patrick, and Deci (2009) stated that a SDT approach for explaining motivation can and has been successfully applied in sport contexts, thus can be used to investigate athletes’ motivation and in the long run understand why athletes drop out. Previous research has found that athletes who dropped out had lower levels of intrinsic motivation and higher levels of amotivation than persistent athletes (García Calvo, Cervelló, Jiménez, Iglesias, & Murcia, 2010; Sarrazin, Vallerand, Guillet, Pelletier, & Cury, 2002). There is also support for more self-determined types of motivation with a positive relationship to physical activity and vice versa (i.e., a negative relationship between less self-determined types of motivations and physical activity; Owen, Smith, Lubans, Ng, & Lonsdale, 2014). Furthermore, more self-determined types of motivation have also been related to better performance (Gillet, Berjot, & Gobancé, 2009) and well-being (Gagné, Ryan, & Bargmann, 2003).

To measure athletes’ motivations for participating in their sport within a SDT framework, Lonsdale, Hodge, and Rose (2008) developed the Behavioural Regulation in Sport Questionnaire (BRSQ). The subscales of the BRSQ include items that represent intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation, and amotivation. The questionnaire was developed using interviews, expert review, and pilot testing. Lonsdale et al. (2008) provided evidence regarding the reliability and validity of the BRSQ scores in elite and non-elite athlete populations.

In summary, research has shown that more self-determined types of motivation have a lot of benefits for athletes and that the fulfilment of the psychological needs is associated with more self-determined motivation (Ryan & Deci, 2000). Therefore, scholars have tried to determine which behaviours positively or negatively relate to motivation, as this information has important consequences for developing intervention to help athletes (Amorose, 2007). An important factor that influence motivation is leadership style (Mageau & Vallerand, 2003; Stenling, 2016) and research has shown that perceptions of coaching behaviour are related to athletes’ motivation (Amorose, 2007). Mageau and Vallerand (2003) found that coaches who are autonomy-supportive (e.g., give feedback, notify athlete’s feelings, and take the athlete’s perspective) indirectly affect athletes’ motivation so they become more intrinsically motivated compared to coaches who are more controlling (e.g., using pressure so that athletes behave, think, and feel in a certain way). More specific, research has shown that coaches who exhibit a transformational leadership style have a positive relation with more self-determined motivation styles among athletes (Beauchamp et al., 2010; Charbonneau, et al., 2001; Price & Weiss, 2013).
Leadership

Chamorro-Premuzic (2007) defined leadership style as a stable pattern of behaviours adopted by a leader that determines their relationship with and influence over members of a group. During the last decades, leadership research has focused on the effects of leaders on followers, especially on leaders’ effectiveness to empower and motivate their followers (Chamorro-Premuzic, 2007). The transformational and transactional leadership theory is one of the most studied leadership theories and research about it has been made mostly in business and military (Dinh, Lord, Gardner, Meuser, Liden, & Hu, 2014; Judge & Piccolo, 2004; Wang, Oh, Courtright, & Colbert, 2011). Academics have pointed out that it is possible to learn transformational behaviours (Barling, Weber, & Kelloway, 1996) and other have suggested that it should be included in training programs for coaches (Vella, Crowe, & Oades, 2013).

Transformational and transactional leadership theory was first developed by Burns (1978) in the political domain and later brought into the organizational context by Bass (1985). In essence, transformational leadership involves leader behaviours that are aimed to empower, inspire, and challenge their followers to enable them to reach their full potential and to transcend their own interests for the greater good (Bass and Riggio, 2006). By doing this, transformational leaders encourage their followers to achieve beyond their own expectations. Bass (1985) proposed a full-range leadership model including transformational, transactional and laissez-faire leadership behaviours. Bass and Riggio (2006) highlight that transformational leadership consists of the following components; idealized influence, (i.e., behaviour of acting like role models for their followers and demonstrate high standards of moral and ethical conduct), inspirational motivation (i.e., behaviours that inspire and motivate followers), intellectual stimulation (i.e., making their followers innovative and do things in a new way, individualized consideration (i.e., sees to each individual follower’s growth, achievement, and needs). Transactional leadership consists of the following components; contingent reward (i.e., giving positive reinforcement for desired behaviour in terms of material reward), management by expectation-active, (clearly state what is expected of the followers and is active in correcting the followers if an error occur), management by expectation-passive (i.e., exhibit a passive approach, intervening only when problems become serious). The transactional components are effective for motivating others to achieve higher performance, but it is not as effective as the components from transformational leadership. Lastly, a laissez-faire leader avoids all kinds of leadership responsibilities and is referred to as passive leadership (Bass & Riggio, 2006).

In 2004, Judge and Piccolo conducted a meta-analysis testing the relative validity in transformational and transactional leadership. They concluded that there is strong empirical evidence for transformational leadership as highly effective with positive relationships to follower job satisfaction, follower leader satisfaction, follower motivation, and group performance. Piccolo and Colquitt (2006) also showed a positive relationship to followers’ motivation.

Researchers have recently taken an interest for transformational leadership within the domain of sport (Arthur & Lynn, 2017). Álvarez, Castillo, Molina-García, and Balague (2016) suggested that the lack of empirical research within the context of sport is a result of the bias related to the origin of the Bass theory (1985), assuming that it would only be applicable in work and organizational contexts. However, an increasing amount of research in sport has demonstrated that transformational behaviours are influencing several motivational, psychosocial and performance related aspects of sport for athletes (Álvarez et al., 2016; Arthur & Lynn, 2017). Specifically, these positive outcomes include lower team and player aggression (Tucker, Turner, Barling & McEvoy, 2010); better sport performance (Charbonneau et al., 2001); and well-being (Stenling & Tafvelin, 2014). Morton, Keith and Beauchamp (2010) also found that athletes gave more effort, were more satisfied with their coach and perceived the coach as effective when their coach displayed transformational behaviours.

From a motivational perspective, research has so far identified associations between transformational leadership and intrinsic motivation in sports (Beauchamp et al., 2010; Charbonneau et al., 2001; Price & Weiss, 2013). Price and Weiss (2013) showed that coaches’
transformational leadership is associated with intrinsic motivation and that coaches’ transformational behaviour was more important for athletes’ individual outcomes than peer leadership. However, possible links between less self-determined types of motivation as well as amotivation and transformational leadership have not been studied as far as we know.

To evaluate transformational leadership in different contexts, Hardy et al. (2010) constructed a questionnaire named Differentiated Transformational Leadership Inventory (DTLI). It was based on Multifactor Leadership Questionnaire-5X and Transformational Leadership Inventory, both of which are widely used in organizational psychology literature. A key factor of DTLI is that it is designed to be context specific and Callow, Smith, Hardy, Arthur, and Hardy (2009) modified DTLI to a sport context. The sub-dimensions included in DTLI are: inspirational motivation, providing an appropriate role model, fostering acceptance of group goals and teamwork, high performance expectations, intellectual stimulation, individual consideration, and contingent reward (Callow et al., 2009).

One limitation with the presented research focusing on transformational leadership in the sport context, is that they either focus on coaches’ self-rating or athletes’ self-rating. It is common in the sport literature to only use a single source when collecting data (Arthur & Lynn, 2017). This becomes a problem because researchers have documented that self-ratings can be invalid and unreliable when compared to others’ ratings (e.g., Ashford, 1989). Therefore, it is important to take in both coaches’ and athletes’ perspective in assessing the coaches level of transformational leadership.

In summary, research has shown that transformational leadership can be applied in a sport context and that it has a positive association with athletes’ performance, psychosocial, and motivational aspects. These aspects could possibly influence whether an athlete chooses to persist or dropout in sports. Although the effects of transformational leadership are well documented, there has been limited research within the field of sport psychology that has examined characteristics or antecedents that impact upon transformational behaviour (Phaneuf, Boudrias, Rousseau, & Brunelle, 2016).

Antonakis and House (2002) imply that research on the transformational leadership theory in organizations is too focused on the behavioural side and that the personality considerations in the leader has not been given enough attention. They call for further research. In extension this might be applied to assist organizations in choosing transformational leaders (Antonakis & House, 2002). Miner (2005) agrees and writes that personality of both the leader and followers is important and that personality factors would be expected to play a more significant role in transformational leadership. Miner (2005) suggests that, in theory, social boldness, introspection, thoughtfulness and activity level should be at a high level among transformational leaders.

In other domains, researcher who are interested in detecting dispositional bases of favourable leadership behaviour have linked personality and transformational leadership behaviour (Bono & Judge, 2004). As personality traits have an impact on what people chose to do and how they behave towards their surrounding (McCrae & Costa, 2003), understanding the role of personality can aid in determining which individuals might gain the most from transformational leadership training for both coaches and athletes and how training approaches might differ on the basis of leader personality (Bono and Judge, 2004).

**Transformational leadership and Personality**

To understand the antecedents of transformational leadership is an important matter, given the benefits of this leadership style (Phaneuf et al., 2016). Previous research has shown that personality traits are associated with transformational leadership (Bono & Judge, 2004; Deinert, Homan, Boer, Voelpel, & Gutermann, 2015). A meta-analysis examining the relationship between personality and transformational and transactional behaviours showed that two personality traits (i.e., extraversion and neuroticism) were related to four dimensions of transformational leadership (i.e., idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration; Bono & Judge, 2004). The meta-analysis was based on research.
conducted mainly in work and military contexts and it used the Big Five factor model of personality as a framework. In other words, the result showed that leaders with a tendency to be sociable, assertive, active, and enthusiastic, demonstrated more leadership characteristics of being role models, inspiring followers, and spending time treating each follower in a caring and unique way, than their introverted counterparts. Extraversion was the strongest and most consistent correlate of transformational leadership (Bono & Judge, 2004). However, Bono and Judge (2004) claimed that the results were modest and that there might be better ways to explore transformational and transactional leadership behaviours than to use Big Five. Other researchers have explored the relationship between the sub-dimensions of transformational leadership and personality traits, also using Big Five as framework. The results showed that all Big Five personality traits were directly linked to transformational leadership sub-dimensions and to the overall measure (Deinert et al., 2015). Extraversion was positively associated with overall transformational leadership scale, but not related to the subscale individualized consideration. This finding is discussed in relation to narcissism, since extraversion has been found to be positively related to narcissism (Deinert et al., 2015).

The majority of research investigating the relationship between personality and transformational leadership has utilized the Big Five framework. However, some researches have used other theoretical frameworks. There has been some recent research conducted on the relationship between narcissism, leader emergence and transformational leadership in university students (Ong, Roberts, Arthur, Woodman, & Akehurst, 2016). Their results indicated that, early on, narcissism was related to transformational leadership, but this relationship was not apparent after a couple of weeks. This suggests that narcissism is positively related to transformational leadership early in new groups (Ong et al., 2016).

While most researches have utilized the Big Five framework, we have chosen to use HEXACO (Lee & Ashton, 2004) because some researchers has pointed out a need for a different approach to measure leadership and personality (Bono & Judge, 2004). The HEXACO model differs some from Big Five and includes six dimensions of personality variation: honesty-humility, emotionality, extraversion, agreeableness versus anger, conscientiousness, and openness to experience. The honesty-humility factor emphasizes trustworthiness, modesty, lack of greed, and lack of slyness, while the emotionality factor includes anxiety, emotional reactivity, sentimentality, and lack of courage. The extraversion factor emphasizes sociability, talkativeness, and liveliness and the agreeableness versus anger factor includes gentleness, good-naturedness, agreeableness, tolerance, and patience. The conscientiousness factor emphasizes orderliness, work effort, and impulse control and lastly, the openness to experience factor includes intellectuality, imagination and unconventionality (Ashton et al., 2004). While the extraversion, conscientiousness, and openness to experience factors in HEXACO are similar to the emotionality, conscientiousness, and openness to experience factors in Big Five, the honesty-humility, agreeableness, and emotionality dimensions of HEXACO combine the variance associated with agreeableness and neuroticism factors in Big Five as well as additional variance not captured within Big Five (Ashton, Lee, De Vries, 2014). Ashton et al. (2004) highlight the honesty-humility factor, which contains adjectives like honest, sincere, fair, and modest versus greedy, conceited, deceitful, and pretentious. In the Big Five, these terms are typically peripheral features of Agreeableness (Ashton et al., 2014).

There has been some research utilizing the HEXACO model in relation to leadership (De Vries, 2008; De Vries, 2012). De Vries (2008) concluded that leaders’ consideration and charismatic leadership (i.e., both inspirational motivation and idealized influence) can be captured in terms of their personality. He showed that charismatic leaders rated themselves high on all traits except emotionality and that leaders’ consideration rated high on all traits. De Vries (2012) concluded that honesty–humility was important for ethical leadership, extraversion for charismatic leadership, agreeableness for supportive leadership, and conscientiousness for task-oriented leadership. De Vries (2012) showed stronger evidence for associations between HEXACO and different leadership models than earlier research. De Vries (2012) also argued that the moderate correlations between personality traits and transformational leadership presented in the meta-
analysis by Bono and Judge (2004) can be explained by relatively low levels of *self-other agreement* and that personality in fact seems to be substantially related to leadership style.

Self-other agreement is the congruence between followers' ratings of a leader and the leader's self-rating (Atwater, Wang, Smither, & Fleenor, 2009). The correspondence in ratings is of interest because it can say a lot about the leader and its followers. For instance, congruence between the leader and the followers in ratings indicate that the leader has good self-awareness (Atwater et al., 2009). It is always important to identify differences in ratings even if a leader may not agree (Fleenor, Smither, Atwater, Braddy, & Sturm, 2010). Leaders with congruent ratings are often more effective than leaders with incongruent rating even though it is a bit more complex (Fleenor et al., 2010). Leaders who overestimate their leadership tend to ignore negative feedback from subordinates (Yammarino & Atwater, 1997). The authors explained that this could mean that the leader behaves arrogant and egotistical, which in turn could have a negative impact on effectiveness and performance. Furthermore, the authors claimed that leaders who underestimate their leadership on the other hand, tend to be associated with mixed performance results. By getting answers from more than one perspective on a leader's development needs and strengths the answers become more reliable and valid. A greater number of raters make the feedback more accurate and easier to use for the recipient (Fleenor, Taylor, & Chappelow, 2008). To our knowledge, this type of research measuring the level of agreement has not been done in sport previously and it is unknown how the two ratings associate to athletes' motivation.

In light of earlier limitations and the potential factor that self-other agreement can play, we want to investigate the level of agreement in ratings to see if there is a relationship between coaches' transformational behaviours, coaches' and athletes' personality and athletes' motivation.

**The present study**

In summary, presented research highlights that transformational leadership is associated with intrinsic motivation among athletes (Beauchamp et al., 2010; Charbonneau, et al., 2001; Price & Weiss, 2013). In other domains personality has been found to affect leaders' transformational leadership styles (De Vries, 2012; Judge, LePine, & Rich, 2006). Most of the previous research on personality in relation to transformational leadership has been limited to a military or business context (Charbonneau et al., 2001; Judge & Piccolo, 2004). Researchers have called for further research to examine antecedents that impact transformational leadership (Phaneuf et al., 2016) as it has important implications for the selection, training, and development of leaders (Bono & Judge, 2004). Arthur and Lynn (2017) also emphasized a need to explore potential moderating variables and individual differences including personality in the context of transformational leadership within sport. Furthermore, Atwater et al., (2009) have indicated that it is important to look at different sources when evaluating leaders. This is because self-awareness is affected by personality and therefore the validity when only using self-ratings can be questioned. Self-ratings as a primary source of information have been a limitation in previous sport research (Arthur & Lynn, 2017).

Given the call for further research and limitations in previous research, we want to explore transformational leadership, personality, and motivation in a sport context. While others have looked at intrinsic motivation, we attempt to extend previous research by adding different types of motivation. Thus, our aims are to explore (1) the impact of transformational leader behaviours on athletes' motivation, (2) the moderating role of personality, and (3) whether self-other agreement potentially influences athlete's motivation. Figure 1 shows the theoretical model for aim one and two. Specifically, we hypothesize that:

1. Transformational leadership will be positively associated with more self-determined motivation types (i.e., intrinsic, integrated regulation and identified regulation) and negatively associated with amotivation.
2. Coaches’ and athletes’ personality traits (i.e., honesty-humility, emotionality, extraversion, agreeableness versus anger, conscientiousness, and openness to experience) will have a moderating role on the relationship between transformational behaviours and athletes’ motivation.

3. The level of difference between ratings from coaches and athletes on the coach’s transformational behaviour will have an impact on athletes’ motivation.

By contributing with more knowledge in this field, our hope is that the findings will further support coach and athlete development. Understanding the association between personality, transformational leadership and athlete motivation may aid in determining which individuals might gain the most from transformational leadership training and how training approaches might differ on the basis of leader personality (Bono and Judge, 2004).

![Figure 1. Theoretical model](image)

**Method**

**Participants**

This study applied a purposive sampling method to recruit participants. A total of 142 coaches in Sweden got access to the survey after confirming that they were interested. Out of them 61 (43%) coaches answered and 132 of their athletes answered the athlete survey. Coaches gender were both male (90.2%) and female (9.8%) and between the ages of 22 and 68 years old ($M = 40.39, SD = 10.27$). The coaches in the sample had been recruited from a variety of individual (arm wrestling, swimming, badminton, tennis, and golf) and team sports (football, ice hockey, floorball, bandy, handball, and basketball) and had been coaching their sport from three months to 39 years ($M = 14.10, SD = 9.25$). They reported spending on average 8.25 hours per week training their athletes ($SD = 7.43$).

The athletes represented in the study were both male (45.5%) and female (54.5%) and between the ages of 15 and 50 years ($M = 20.61, SD = 5.28$). Furthermore, the sample of represented sports were at various levels of performance including highest division/international (22.7%), second highest (4.5%), division 1 (32.6%), division 2 (23.5%), and lower divisions (16.6%). Athletes had been involved with their sport between two months and 23 years ($M = 5.82, SD = 4.88$); had been coached by their present coach for an average of 2.12 years ($SD = 2.10$); and spent an average of 10.13 hours training each week ($SD = 5.5$).

For our second and third hypothesis a dyad design was used. For this we matched athletes with their coaches and a total of 38 dyads were matched together (38 coaches and 125 athletes). The coaches were both male (86.8%) and female (13.2%) and between the ages of 22 and 58 years old ($M = 40.34, SD = 9.48$). The athletes were both male (47.2%) and female (52.8%) and between the ages of 15 and 50 years ($M = 20.54, SD = 5.26$).
Instruments

**Personality.** To measure personality traits a Swedish version (Bergh & Akrami, 2016) of the validated HEXACO-60 (Ashton & Lee, 2009) was used. The six dimensions of HEXACO are honesty-humility (e.g., “I would never accept a bribe, even if it were very large”), emotionality (e.g., “I would feel afraid if I had to travel in bad weather conditions”), extraversion (e.g., “In social situations, I’m usually the one who makes the first move”), agreeableness versus anger (e.g., “I rarely hold a grudge, even against people who have badly wronged me”), conscientiousness (e.g., “I plan ahead and organize things, to avoid scrambling at the last minute”) and openness to experience (e.g., “I’m interested in learning about the history and politics of other countries”). All dimensions are measured by ten items. All responses were rated on a Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Composite reliability of the subscales for the coaches was between .60 and .79 (shown in table 2). For athletes the composite reliability was between .66 and .84 (shown in table 2). This supports previous research that also found satisfactory psychometric properties for all dimensions of the HEXACO-60 (Ashton & Lee, 2009).

**Transformational leadership.** To determine perceptions of transformational leadership behaviours a Swedish version of Differentiated Transformational Leadership Inventory (DTLI; Callow et al., 2009; Hardy et al., 2010) was used. A translation–back-translation procedure was followed to arrive at the Swedish version of DTLI. The DTLI is a 31-item inventory that measures seven dimensions of transformational/transactional leadership. These seven dimensions are individual consideration measured by four items (e.g. “helps team members to develop their strengths”), inspirational motivation measured by four items (e.g. “talks in a way that makes me believe I can succeed”), intellectual stimulation measured by four items (e.g. “gets me to re-think the way I do things”), fostering acceptance of group goals and promoting teamwork measured by three items (e.g. “encourage athletes to be team players”), high performance expectations measured by five items (e.g. “will not settle for second best”), appropriate role model measured by five items (e.g. “Leads by example”), and contingent reward measured by six items (e.g. “praises athletes when they show improvement”). All responses were rated on a Likert scale, ranging from 1 (not at all) to 5 (all the time). Composite reliability of the overall scale for coaches respectively athletes was between .87 and .95. This supports previous research that also found satisfactory psychometric properties for the DTLI (Callow et al., 2009).

**Athletes’ type of motivation.** A Swedish version, found in other studies (e.g., Stenling, Lindwall, & Hassmén, 2015), of the 24-item BRSQ (Lonsdale, Hodge & Rose, 2008) was used to assess the full complement of athletes’ motivations for participating in their sport based on SDT. The responders were asked to indicate how well the item corresponds to the reason for participating in their sport on six dimensions. The six dimensions were intrinsic motivation measured by four items (e.g., “because I enjoy it”), integrated regulation measured by four items (e.g., “because it’s a part of who I am”), identified regulation measured by four items (e.g., “because I value the benefits of sport”), introjected regulation measured by four items (e.g., “because I would feel guilty if I quit”), external regulation measured by four items (e.g., “because if I didn’t other people will not be pleased with me”) and amotivation measured by four items (e.g., “but I question why I continue”). All responses were rated on a Likert scale, ranging from 1 (completely false) to 7 (completely true). Composite reliability of the subscales for the athletes was between .77 and .88 (shown in table 1), which is in line with previous research made by Lonsdale et al. (2008) who showed initial support for the psychometric properties of the BRSQ.

Both coaches and athletes were asked to complete HEXACO and DTLI, then athletes were asked to also complete BRSQ.

**Design**

To test the hypotheses the present thesis adopted a cross sectional research design. It was a descriptive study where we collected data from a sport context. The cross-sectional design was chosen because of the limited time frame. To explore the self-other agreement at least one athletes
had to complete the survey regarding their coaches’ transformational behaviour. Participants had to be older than 15 years. We collected data from 2017-02-01 until 2017-03-26.

**Procedure**

Coaches were contacted via e-mail or telephone where the aims and objectives of the study were discussed. Two methods of data collection were utilized; online survey and paper and pen approaches were used. Upon providing verbal or written consent, the coaches received an e-mail with instructions about completing the survey, the aims for the research and two links where the surveys could be reached (i.e., one for the coaches and one for their athletes). The surveys were administered through the web-based platform Textalk Websurvey, which had an agreement with Umeå University. Four different surveys were created: one for individual coaches, one for team coaches, one for individual athletes and one for team athletes. The reasoning for adopting this approach lies in the questions that were being asked. For this study the questions differed depending on the sport type (i.e., team or individual sport) with alteration of team member to group member depending on participant. The survey provided information regarding the purpose, voluntary nature and confidentiality of the project. Participants were also made aware that they could withdraw from the study without having to justify their reason. On completion of the survey, coaches were asked to send the athletes their survey via another link together with a personal code that they were asked to create. The athletes were given the same information in their survey and were asked to document their coach’s unique code on their survey so that we could match the coach-athlete dyads. Athletes were asked to complete the survey independently from their coach and in their own time. The survey took 15-20 minutes to complete. All participants were given an opportunity to provide their email address to receive a summary of the findings if they wished.

The second and alternative method of data collection took a person oriented approach. Coaches were contacted via e-mail or telephone and the aims and objectives of the study was discussed. Upon consent to participate, a convenient time and place was arranged for us to visit the sports club and elicit participation of both the coaches and the athletes. The aims and objectives, anonymity and confidentiality were discussed and both athletes and coaches were asked to provide written consent. Coaches and athletes were provided with the survey and were asked to complete this independently from one another. Upon completion participants were debriefed and thanked for their time. The survey took 15-20 minutes to complete. All participants were given an opportunity to provide their email address to receive a summary of the findings if they wished.

**Statistical analysis**

We used IBM SPSS Statistics 24.0 (2015) to analyse our data. First, we analysed descriptive statistics (e.g., for the biographical questions and for all variables within the study). The interpretations of effect sizes are based on Muij (2011). Then we conducted inferential statistics including linear regression analysis and moderated regression analysis using Hayes’ (2013) PROCESS macro. For our third hypothesis we looked at the discrepancy scores between the athletes’ and coaches’ ratings on the coaches’ transformational behaviour. To do this the athletes’ ratings were aggregated to group levels. The percentage of agreement between coaches and athletes for the overall transformational leadership was calculated. In line with the suggestion from Fleenor et al. (2010), ratings were judged as disagreement if the deviation between ratings was more or less than 0.5 standard deviations of the standardized variable. The agreement between coaches’ and athletes’ ratings of the global DTLI score was measured by constructing difference scores for the coaches and the aggregated mean ratings for their athletes. Next, the correlations between the difference scores and the athletes’ motivation were investigated.
Ethical considerations

Participants in the study were informed in writing about the aim of the thesis, the informed consent, confidentiality and that the data is going to be deleted after the study in accordance with Vetenskapsrådet (2002). Participants were also informed that they could abort the survey if they wanted to. We did not ask for any personal information so we were not able to trace the answers to any participant, instead the unique personal code that the coach created was the only link between athletes and coaches. All participants had to be older than 15 years of age to meet the inclusion criteria for the study.

Results

Table 1 presents means, standard deviations, alpha coefficients, and bivariate correlations of coaches' ratings on global DTLI, athletes' ratings of their coaches' global DTLI and their type of motivation. Athletes, on average, reported relatively high levels of intrinsic motivation and moderate to high levels of integrated regulation and identified regulation. Additionally, athletes reported to relatively low levels of introjected regulation, external regulation, and amotivation. Athletes perceived that their coach have relatively high levels of transformational leadership, measured by a global DTLI scale. Coaches perceived themselves to exhibit relatively high levels of transformational leadership. Bivariate correlations indicated significant associations between athletes' rating of the global DTLI and four types of athletes' motivation (i.e., intrinsic motivation, integrated regulation, identified regulation, and amotivation). The correlations also indicated one significant association between the coaches' rating of their coaches' global DTLI and athletes' motivation (i.e., integrated regulation). Cronbach alpha scores were acceptable (> .6; Loewenthal, 2004).

Table 1: Correlation, Means (M), Standard Deviations (SD), and Alpha (α) for coaches' rating of Global DTLI (N = 61), athletes' rating of their coaches Global DTLI, their type of motivation. (N = 132).

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Note. G-DTLI = global DTLI; IM = intrinsic motivation; IR = integrated regulation; IdR = identified regulation; InR = introjected regulation; ER = external regulation; AM = amotivation; A = athletes; C = coaches * p < .05. ** p < .01.

Since hypothesis 2 and 3 required coach-athlete dyads, the sample was reduced to 38 dyads, which consisted of 38 coaches and 125 athletes. This is because only 38 coaches had one or more athletes who responded on the survey. If the coach had more than one athlete rating the coach's transformational behaviour the athletes’ ratings were aggregated. Due to the change in sample size another bivariate correlation analysis was warrant. Table 2 presents means, standard
deviations, alpha coefficients, and bivariate correlations of all variables under investigation for the coach-athlete dyads used in hypothesis 2 and 3.

Table 2 consist of the 38 dyads and presents means, standard deviations, alpha coefficients, and bivariate correlations of all variables under investigation. Athletes and coaches reported similar levels within the 38 dyads as within the whole sample. In contrast from table 1 the significant correlations between athletes' and coaches' ratings on global DTLI did not show within the 38 dyads. Both athletes and coaches reported moderate levels on all personality traits. Bivariate correlations indicated significant associations between some of the coaches' and athletes' personality traits and athletes' ratings on global DTLI as well on athletes' different motivation styles.

Hypothesis 1

The first hypothesis concerned a possible relationship between athletes’ perception of their coaches’ transformational behaviour and their type of motivation (i.e., intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation, and amotivation). The results of the regression analyses are displayed in figure 2 and include information about the unstandardized regression coefficients for hypothesis 1. Athletes’ ratings of their coach significantly relate to four types of motivation. First, intrinsic motivation, β = .29, t(128) = 2.032, p < .05 which explained a significant proportion of variance in intrinsic motivation, R² = .031, F(1, 129) = 4.13. Second, integrated regulation, β = .35, t(128) = 2.037, p < .05 which explained a significant proportion of variance in integrated regulation, R² = .031, F(1, 129) = 4.15, p < .05. Third, identified regulation, β = .50, t(128) = 2.74, p < .001 which explained a significant proportion of variance in identified regulation, R² = .055, F(1, 129) = 7.51, p < .05. Fourth, amotivation, β = -.39, t(128) = -2.059, p < .001 which explained a significant proportion of variance in amotivation, R² = .032, F(1, 129) = 4.24, p < .05. To test hypothesis 1, data from all 132 athletes was used.

![Figure 2](image)

**Figure 2.** Regression analysis of how athletes (N = 132) perceive their coaches on DTLI and how that has a connection to their motivation. *= p < 0.05; **= p < 0.001.
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Note. G-DTLI = global DTLI; IM = intrinsic motivation; IR = integrated regulation; IdR = identified regulation; InR = introjected regulation; ER = external regulation; AM = amotivation; O = openness; C = conscientiousness; A = agreeableness; X = extraversion; E = emotionality; H = honesty-humility; A = athletes; C = coaches. * p < .05. ** p < .01.
Hypothesis 2

For the second hypothesis, only significant results are presented. The second hypothesis concerned coaches’ and athletes’ personality traits as moderators on the relationship between athletes’ perception of their coaches’ transformational leadership and athletes’ type of motivation. The 38 coach-athlete dyads were used for this. Table 3, 4, and 5 concerns coaches’ personality and table 6 concerns athletes’ personality.

Table 3 shows the unstandardized regression coefficients with standard errors and confidence intervals (in square bracket) estimating intrinsic motivation (Y). The result show that when intrinsic motivation (Y) is the dependent variable and the global DTLI score (X) is the independent variable, coaches’ personality traits honesty-humility, emotionality and extraversion are significant moderators. The conditional indirect effects at different levels of the moderator (low, medium or high on the personality trait) is not showed in the tables. When inspected it showed that honesty-humility moderating the effect if the self-ratings were high. For emotionality, no level was significant. It showed that extraversion moderates the effect if the self-ratings are low.

Table 4 shows the unstandardized regression coefficients with standard errors and confidence intervals (in square bracket) estimating identified regulation (Y). The result show that when identified regulation (Y) is the dependent variable and the global DTLI score (X) is the independent variable, coaches’ personality traits honesty-humility, emotionality, extraversion and conscientiousness are significant moderators. Inspection of the conditional indirect effects at different levels of the moderator showed that honesty-humility is moderating the effect if the self-ratings were high, showing higher self-reported identified regulation among athletes. For emotionality it showed that it moderates the effect if the self-ratings are low. For extraversion it showed that it moderates the effect if the self-ratings are low. For conscientiousness no level was significant.
Table 4
Coaches’ personality trait honesty-humility, emotionality, extraversion and conscientiousness as significant moderators on identified regulation.

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<tr>
<td>Emotionality * DTLI mean</td>
<td>1.81</td>
<td>.62</td>
<td>[.56, 3.06]**</td>
</tr>
<tr>
<td>R²</td>
<td>.32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>(3.34) 5.35, p &lt; 0.01</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Identified Regulation mean (Y)</th>
<th>SE</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-13.78</td>
<td>6.41</td>
<td>[-26.18, -75]</td>
</tr>
<tr>
<td>Extraversion</td>
<td>4.92</td>
<td>1.63</td>
<td>[1.62, 8.23]</td>
</tr>
<tr>
<td>DTLI mean</td>
<td>5.13</td>
<td>1.50</td>
<td>[2.09, 8.17]</td>
</tr>
<tr>
<td>Extraversion * DTLI mean</td>
<td>-1.34</td>
<td>.37</td>
<td>[-2.09, .59]***</td>
</tr>
<tr>
<td>R²</td>
<td>.39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>(3.34) 6.51, p &lt; 0.001</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Identified Regulation mean (Y)</th>
<th>SE</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>22.47</td>
<td>6.58</td>
<td>[9.10, 35.85]</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>-4.63</td>
<td>1.85</td>
<td>[-8.40, -8.7]</td>
</tr>
<tr>
<td>DTLI mean</td>
<td>-4.86</td>
<td>1.68</td>
<td>[-8.26, -1.46]</td>
</tr>
<tr>
<td>Conscientiousness * DTLI mean</td>
<td>1.30</td>
<td>.48</td>
<td>[.34, 2.27]**</td>
</tr>
<tr>
<td>R²</td>
<td>.26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>(3.34) 3.98, p &lt; 0.05</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. The unstandardized regression coefficients (B) with standard errors (SE) and 95% confidence intervals (CI) [in square bracket] and identified regulation (Y). Effects are significant when the upper and lower bound of the bias corrected 95% confidence intervals does not contain zero. * p < .05. ** p < .01. *** p < .001.

Table 5 shows the unstandardized regression coefficients with standard errors and confidence intervals (in square bracket) estimating identified regulation (Y). The result show that when identified regulation (Y) is the dependent variable and the global DTLI score (X) is the independent variable, coaches’ personality traits honesty-humility is a significant moderator. Inspection of the conditional indirect effects at different levels of the moderator showed that honesty-humility is moderating the effect if the self-ratings is medium and high.

Table 5
Coaches’ personality trait honesty-humility as a significant moderator on amotivation.

<table>
<thead>
<tr>
<th></th>
<th>Amotivation mean (Y)</th>
<th>SE</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>-14.99</td>
<td>5.99</td>
<td>[-27.16, 2.82]</td>
</tr>
<tr>
<td>Honesty-Humility</td>
<td>5.56</td>
<td>1.79</td>
<td>[1.92, 9.20]</td>
</tr>
<tr>
<td>DTLI mean</td>
<td>4.15</td>
<td>1.48</td>
<td>[1.15, 7.16]</td>
</tr>
<tr>
<td>Honesty-Humility * DTLI mean</td>
<td>-1.34</td>
<td>.44</td>
<td>[-2.25, -.44]</td>
</tr>
<tr>
<td>R²</td>
<td>.24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>(3.34) 3.64, p &lt; 0.05</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. The unstandardized regression coefficients (B) with standard errors (SE) and 95% confidence intervals (CI) [in square bracket] and amotivation (Y). Effects are significant when the upper and lower bound of the bias corrected 95% confidence intervals does not contain zero. * p < .05.
Table 6 shows the unstandardized regression coefficients with standard errors and confidence intervals (in square bracket) estimating integrated regulation (Y) and identified regulation (Y). The result show that when integrated regulation (Y) or when identified regulation (Y) is the dependent variable and the global DTLI score (X) is the independent variable, athletes’ personality trait agreeableness is a significant moderator. Inspection of the conditional indirect effects at different levels of the moderator showed that agreeableness moderating the effect if the self-ratings is low and medium.

Table 6
Athletes’ personality trait agreeableness as a significant moderator on integrated regulation and identified regulation.

<table>
<thead>
<tr>
<th></th>
<th>Integrated Regulation (Y)</th>
<th>Identified Regulation mean (Y)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE</td>
</tr>
<tr>
<td>Constant</td>
<td>-6.84</td>
<td>4.35</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>3.41</td>
<td>1.35</td>
</tr>
<tr>
<td>DTLI</td>
<td>3.31</td>
<td>1.07</td>
</tr>
<tr>
<td>Agreeableness * DTLI</td>
<td>-0.92</td>
<td>0.33</td>
</tr>
<tr>
<td>R²</td>
<td>.11</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>(3, 127) 5.16, p &lt; 0.01</td>
<td></td>
</tr>
</tbody>
</table>

Note. The unstandardized regression coefficients (B) with standard errors (SE) and 95% confidence intervals (CI) [in square bracket] integrated regulation and identified regulation (Y). Effects are significant when the upper and lower bound of the bias corrected 95% confidence intervals does not contain zero. ** p < .01.

Hypothesis 3

We hypothesize that the level of difference between ratings from coaches and athletes on the coach’s transformational behaviour has an impact on athletes’ motivation. To test this hypothesis, three agreement groups were created: coaches who rated DTLI equal to the ratings of their athletes, coaches who rated DTLI higher than their athletes, and coaches who rated DTLI lower than their athletes. The result show that 16% of the coaches were in agreement with their athletes. A total of 42% of the coaches over-rated their DTLI compared to their athletes and 42% under-rated. To answer if the level of agreement relate to the athletes’ motivation correlations between difference scores on the DTLI and athletes’ rating of motivation were calculated. No correlations were found. After analysing the groups separately a negative correlation between the differences for under-rating coaches and their athletes’ amotivation, r(14) = -.54, p < .05, was revealed. When the groups were analysed separately it was revealed that coaches who under-estimated strongly correlated to athletes’ amotivation, r(14) = -.54, p < .05.

Discussion

The purpose of the present study was to investigate the relationship between coaches’ transformational leadership and athletes’ motivation and the moderating role of personality. Furthermore, we wanted to investigate the level of agreement or disagreement between athletes’ and coaches’ ratings of transformational leadership and the possible impact this has on athlete’s motivation.
Hypothesis 1

Our first hypothesis was that transformational leadership is positively associated with more self-determined motivations (i.e., intrinsic motivation, integrated regulation and identified regulation) and negatively associated with amotivation. In establishing the relationship between athletes’ perceptions of their coaches’ transformational behaviours (e.g., treats each member as an individual, talks optimistically, challenges athletes to think, and leads by example) and athletes’ motivation, we found a positive significant relationship between athletes’ perceptions of their coaches’ transformational behaviours and more self-determined motivations. This means that athletes’ report that they are participating with their sport for the fun and satisfaction that they get from just taking part (intrinsic motivation) when coaches’ exhibit transformational behaviours. Transformational behaviour was also associated with integrated regulation, which means that the athletes show that they have internalized new values and behaviour and show that when they are participating in their sport it is an expression of who they are. Furthermore, transformational behaviour was associated with identified regulation, which means that the athletes’ see the importance of being able to master an activity to do something else to achieve a goal (e.g., teaches the athletes self-discipline or learn things that could be useful in their life). Lastly, the result showed a negative significant relationship with amotivation, which means that athletes do not question why they continue with their sport or wonder what the point is if they perceive their coach as more transformational.

These findings fully support our hypothesis. The findings are in line with previous research, which emphasizes transformational leadership to have a positive relationship with self-determined motivation (Beauchamp et al., 2010; Charbonneau, et al., 2001; Price & Weiss, 2013). Research has found that the fulfilment of the three basic needs (i.e., competence, autonomy, and relatedness) is connected to more self-determined motivation (Ryan & Deci, 2000; Stenling, 2016), which we suggest can be seen as a bridge between the relationship of transformational leadership and self-determined motivation. The finding regarding amotivation also represents a logical finding as amotivation is seen as the other end of the continuum to intrinsic motivation (Ryan & Deci, 1985). However, in previous research we have not come across any research exploring the relationship between transformational leadership and amotivation for athletes. One reason for this might be that previous research already has identified a relationship between transformational leadership and intrinsic motivation and therefore it might not be seen as necessary to explore amotivation. Thus, our result extends previous research and support that transformational leadership can be applied in the sport context. Since transformational leadership has shown to have a positive relationship with self-determined motivation, we suggest that transformational leadership should be included in training programs for coaches, as other academics have pointed out (e.g., Vella et al., 2013). This is because transformational leadership is linked to athletes’ participating in their sport for the fun and satisfaction it gives or see benefits of participating. More and more evidence suggests that transformational behaviours can be taught through short-term interventions (Barling et al., 1996), so hopefully more sport clubs will implement transformational leadership training in their organization. Achieving more self-determined motivation can be seen as a goal in itself but it is also associated with better performance (Gillet et al., 2009) and well-being (Gagné et al., 2003). These outcomes are something that would benefit sport clubs, the coaches and the athletes participating.

The reason we investigated athletes’ perception of their coaches’ behaviours is because they are the ones who are being coached and therefore best can assess how transformal their coaches’ behaviours are. Since transformational leadership effects are often described as an attributed characteristic that is made by followers who receive the leadership (Arthur & Lynn, 2017), it is only the athletes who have directly received the leadership that can determine whether transformational effects have occurred or not.
Hypothesis 2

Our second hypothesis examined the moderating role of personality on the relationship between transformational behaviours and athletes’ motivation. We also inspected the conditional indirect effects at different levels of the moderator (i.e., low, medium or high). The findings showed that coaches’ personality moderated the relationship, which gives partial support for our hypothesis. Specifically, four different personality traits (i.e., honesty-humility, emotionality, extraversion and conscientiousness) showed to be moderating three types of motivations; participating for the fun and satisfaction it gives (intrinsic motivation), see benefits and learn new things useful in life (identified regulation) and no motivation at all (amotivation). At the same time athletes’ own agreeableness had a moderating role for two types of motivation; when athletes see their participation as an expression of who they are (integrated regulation) and also when they see the benefits and learn new things useful in life (identified regulation).

Higher ratings on coaches’ honesty-humility turned out to have an impact on the relationship between transformational leadership and three kinds of motivations. The result showed that if coaches rated themselves as more trustworthy, modest, and with less greed and slyness their athletes were driven more by intrinsic motivation or identified regulation. If coaches reported medium or high level on the trait it showed that athletes report less amotivation. These findings are important because they show that honesty-humility, which is unique for HEXACO, is important for the relationship between transformational leadership and motivation. It is also important because it is the only personality trait that we found which has a moderating role for both sides of the continuum of motivation, having a positive impact on intrinsic motivation and a negative on amotivation. This knowledge can be important for selection of coaches where personality test might be a useful tool in recruiting or training coaches, as suggested by Bono and Judge (2004). While personality traits are seen as stable, coaches can use this knowledge and surround themselves with assistant coaches who complement their personality, in this case lack of honesty-humility. Our findings concerning high honesty-humility and a positive relationship between transformational leadership and self-determined motivation support earlier research by De Vries (2012), who showed that individuals high on honesty-humility were connected to charismatic leadership which is an integral part of transformational leadership.

Emotionality turned out to have an impact on the relationship between transformational leadership and two kinds of motivations. It had an impact when athletes reported that they were driven by intrinsic motivation. However, inspection of the conditional indirect effects at different levels of the moderator did not show that any level stood out. The unstandardized regression coefficients was positive, indicating that coaches who rated themselves as more anxious, emotional reactive, sentimental and lack of courage had athletes who were driven more by intrinsic motivation. Furthermore, coaches’ self-ratings that were lower on emotionality also turned out to have an impact on the relationship between transformational leadership and athletes who were driven by identified regulation, creating a negative relationship between the two. This means that too low ratings on emotionality can be negative for athletes’ more self-determined motivation.

Low ratings on coaches’ extraversion turned out to have an impact on the relationship between transformational leadership and two kinds of motivations. The result showed that if a coach rated themselves low on sociable, talkative and lively their athletes reported that they were driven by intrinsic motivation and identified regulated.

The findings about emotionality and extraversion goes in some ways against earlier research (e.g. Bono & Judge, 2004) which showed that higher levels of extraversion is related to transformational leadership. Furthermore, De Vries (2012) showed that leaders rated high on all traits, except emotionality, was connected to a charismatic leader. Our result, on the other hand, showed that low ratings of extraversion and high or low ratings of emotionality, depending on type of motivation, moderated the relationship between transformational leadership and motivation. An alternative explanation could be that extraversion is positively related to narcissism (Deinert et al., 2015), which Ong et al. (2016) suggested is positively related to...
transformational leadership in new groups. The average time that athletes’ in our study had been coached by their coaches was 2.12 years, so the relationship with the coach is not really new for the athletes who participated in this study. However, in a sport context newcomers are relatively common so it could be that both coaches and athletes still perceive the group as new. That could be one reason why our findings do not go in line with De Vries (2012) results. Furthermore, the interpretation of the result should be in the light of that coaches’ mean scores are close to average on both traits. This could mean that it is a tipping point where too much or little emotionality/extraversion is bad for the relationship between transformational leadership and self-determined motivation. This means that when low extraversion moderated the relationship it can be interpreted that an average rating on extraversion moderates the relationship, while too much or too little extraversion is negative for the relationship.

Conscientiousness turned out to have an impact on the relationship between transformational leadership and when athletes reported that they were driven more by intrinsic motivation. However, inspection of the conditional indirect effects at different levels of the moderator did not show that any level stood out. The unstandardized regression coefficients was positive, indicating that coaches’ who self-rated themselves as more orderliness, had harder work effort, and better impulse control had athletes who were driven more by identified regulation. De Vries (2012) showed that high levels of conscientiousness was connected to charismatic leadership which goes in line with our result.

When it comes to athletes’ ratings of their own personality, agreeableness was found to play a moderating role to the relationship between coaches’ transformational behaviours and athletes’ integrated regulation and identified regulation motivation when the ratings were low or medium. This means that athletes who rated themselves as low or medium on gentleness, good-naturedness, agreeableness, tolerance and patience also reported themselves as that they were driven by integrated regulation and identified regulation. This result show that it is not only coaches’ personality that is a moderator but also athletes’ personality.

As Phaneuf et al. (2016) highlighted it is important to understand the antecedents of transformational leadership, given the possible benefits of this leadership style. As far as we know, this is the first study to explore the moderating role of personality on the relationship between transformational leadership and motivation in a sport context. Our result show that some personality traits moderates the relationship between transformational behaviour and athletes’ motivation. Hence, a personality test could be included in the already suggested transformational leadership training program so that coaches learn about how their personality and transformational behaviours can affects their athletes’ motivation. More self-awareness among coaches might be good for their work as a coach and it is also important knowledge if they are going to recruit an assistant coach, who can complement their personality.

Hypothesis 3

Finally, we hypothesized that the level of agreement or disagreement between the coaches’ self-rating and athletes’ ratings of their transformational behaviours would affect athletes’ motivation. Our findings showed that a large proportion of the sample of coaches rated the DTLI higher or lower compared to their athletes. Since this type of research has not been done previously in a sport context, there is not much to compare our result with, within this context. That said, outside of the sport context, Fleenor et al. (2010) suggests that congruence between the leaders’ and the followers’ ratings indicate that the leader has good self-awareness, which our results contradict and thus indicating that the sample of the coaches within the present study do not have good self-awareness. Furthermore, leaders with congruent ratings are often seen as more effective compared to coaches with incongruent ratings (Fleenor et al., 2010). Our result showed that neither over-rating, under-rating nor agreeing had any significant relationship with athletes’ motivation when the agreement groups were analysed together. When we looked at the agreement groups separately, a negative relationship between under-rating coaches and their athletes’ amotivation emerged, suggesting that the more the coaches underestimate their transformational
behaviour, the more the athletes rated themselves as less amotivated. The result of our analysis indicated a partial support to our hypothesis. This could indicate that coaches who don’t believe that they display transformational behaviours affect whether athletes feel no motivation for their sport and this could potentially lead to athletes getting more persistent. However, due to a small sample size, we are unable to draw any stable conclusions. It is possible that our result, based on Yammarino and Atwater’s (1997) work on self-other agreement between leaders and subordinates in a business context, could indicate that coaches who overestimated their leadership ignores feedback from their athletes and that this could have a negative impact on performance. Similarly, in line with the Yammarino and Atwater’s (1997) conclusion, coaches who underestimates their transformational leadership could probably be associated with mixed performance results if investigated further. This in turn could potentially have an impact on athletes’ motivation because self-determined motivation is positively related to higher level of performance (Gillet et al., 2009).

Limitations and future research

Whilst our data has provided some interesting preliminary findings, the thesis is not without its limitations. When it comes to coaches’ transformational leadership we used two sources (i.e., both athletes and coaches). However, we did not systematically observe the coaches’ transformational behaviour in practice, which Arthur and Lynn (2017) suggest is important because it might help to shed more light on the coaching process. The data used in this thesis has been collected through self-report surveys. Self-reports make it possible to assess individual perceptions, which are difficult to measure (Paulhus & Vazire, 2009). However, self-reports also have some disadvantages that include social desirability (e.g., tendency of respondents to answer questions in a manner that will be viewed favorably by others) and inconsistent responding (Paulhus & Vazire, 2009). This could lead to the conclusion that the self-ratings are invalid and unreliable and Ashford (1989) has shown that this could be true when compared to others’ ratings.

Another limitation with the present study is that we only looked at the head coaches’ transformational leadership and did not investigate how co-coaches, assistant coaches, informal leaders or peer leadership affect athletes’ motivation. The degree of involvement (e.g., how many hours spent with the coach) differed between coaches and our thesis included a relatively small sample size, especially for the coach-athlete dyads, which makes it difficult to generalize our findings. Future researchers may benefit from recruiting larger samples of participants, and especially larger samples of coach-athlete dyads. This thesis used a cross sectional research design which doesn’t allow cause and effect conclusions, however we found it necessary given the lack of previous research in this field. We call for longitudinal research designs to explore how coaches’ transformational leadership does to their athletes in the future. Future research could also look for other moderating variables that might have an impact on the relationship between transformational leadership and motivation. This could contribute to a broader explanatory model for athletes’ motivation. Furthermore, it would be good to investigate athletes who recently dropped out from sport to see if the choice had anything to do with their coaches’ leadership style and personality. Finally, we think it could be of interest to compare gender and level of athletic performance as well as team and individual athletes to see if the findings can be generalized.

Practical implications and conclusion

In line with previous research, we found that coaches’ transformational leadership affects athletes’ motivation (Beauchamp et al., 2010; Charbonneau et al., 2001; Price & Weiss, 2013; Vidić & Burton, 2010) and we also found that transformational leadership is associated with amotivation. Our result extend previous research by adding more types of self-determined motivation. We also found that both athletes’ and coaches’ personality serve as moderators of this relationship and that the level of agreement between coaches’ and athletes’ ratings of the coaches’ transformational leadership only influence athletes’ amotivation if the coach under-estimates his or her transformational leadership. This could be useful knowledge for both coaches, athletes, and sport clubs and it can be used in training programs for coaches. By providing instructions and
information about transformational behaviours and also providing personality test for both coaches and athletes this can help the participants to be trained in which behaviours that are good for creating more self-determined motivation. The personality aspect is harder to change but it can provide an explanation to why things are working or not working. Since transformational behaviour can be taught (Barling et al., 1996) and is associated with more intrinsic motivation tomorrow’s coaches can break the trend where adolescents drop out of sport as they get older.

References


Deinert, Homan, Boer, Voelpel, & Gutermann. (2015). Transformational leadership sub-dimensions and their link to leaders' personality and performance. The Leadership Quarterly, 26(6), 1095-1120. doi: 10.1016/j.leaqua.2015.08.001


