THE ROLE OF NARCISSISM IN SPORT COACHING:

A SELF-DETERMINATION THEORY PERSPECTIVE

By

DORIS MATOŠIĆ

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ABSTRACT

The aim of the current thesis was to investigate coach narcissism as an antecedent of controlling and autonomy-supportive coach interpersonal styles proposed by self-determination theory (SDT); potential indirect effects that underlie those relations, and the outcomes of such coach interpersonal styles. The current thesis is comprised of a systematic review and three empirical chapters. Chapter 2 reviewed the literature on antecedents of controlling and need supportive interpersonal styles and identified narcissism as an antecedent of particular importance to sport coaching. This chapter has also illustrated a dearth of research investigating narcissism as an antecedent of coach interpersonal styles, which then became a key theme of the empirical studies that followed. Across these studies, narcissism was found to be positively associated with controlling interpersonal style in coaches (Chapters 3, 4, and 5), however it was not associated with autonomy-supportive style (Chapter 3). Some of these studies also revealed indirect effects (i.e., empathic concern, effectiveness beliefs about controlling interpersonal style) that helped explain the relation between narcissism and controlling interpersonal style (Chapters 3 and 5), and narcissism and autonomy-supportive interpersonal style (Chapter 3). Finally, coaches' controlling interpersonal style was associated with need frustration and positive attitudes toward doping in athletes (Chapter 4), and moral disengagement in coaches (Chapter 5). These novel finding extend SDT literature by offering further understanding on antecedents and outcomes of coach interpersonal styles.

I dedicate this thesis to my parents, Suzana and Željko Matošić, and my sisters, Željana and Laura Matošić, for their endless love, support, and encouragement during all these years.

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LIST OF PUBLICATIONS AND CONFERENCE PRESENTATIONS

This thesis is based upon the following four papers. All the thesis components including study designs, data collections, statistical analysis and writing were conducted by Doris Matosic. Dr Ian D. Boardley and Professor Nikos Ntoumanis advised on all of the aspects including paper editing. Where listed, the co-authors also advised on study design, statistical analyses, and paper editing.

1. **Matosic, D.**, Ntoumanis, N., & Quested, E. (2016). Antecedents of need supportive and controlling behaviors from a self-determination theory perspective: A review and implications for sport psychology research. In M. Raab, P. Wylleman, R. Seiler, A. M. Elbe, & A. Hatzigeorgiadis (Eds.), *Sport and exercise psychology research: From theory to practice* (pp. 145-180). Elsevier. doi: 10.1016/B978-0-12-803634-1.00007-8
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Publications

1. **Matosic, D.**, Ntoumanis, N., Boardley, I.D., Sedikides, C., Stewart, B., & Chatzisarantis, N. (2017). Narcissism and coach interpersonal style: A self-determination theory perspective. *Scandinavian Journal of Medicine & Science in Sports, 27,* 254-261. doi: 10.1111/sms.12635
2. **Matosic, D.**, Ntoumanis, N., & Quested, E. (2016). Antecedents of need supportive and controlling behaviors from a self-determination theory perspective: A review and implications for sport psychology research. In M. Raab, P. Wylleman, R. Seiler, A. M. Elbe, & A. Hatzigeorgiadis (Eds.), *Sport and exercise psychology research: From theory to practice* (pp. 145-180). Elsevier. doi: 10.1016/B978-0-12-803634-1.00007-8
3. **Matosic, D.**, Ntoumanis, N., Boardley, I.D., Stenling, A., & Sedikides, C. (2016). Linking narcissism, motivation and doping attitudes in sport: A multilevel investigation involving coaches and athletes. *Journal of Sport & Exercise Psychology, 38,* 556-566. doi: 10.1123/jsep.2016-0141

Conference Presentations

1. **Matosic, D.,** Ntoumanis, N., Boardley, I.D., Stenling, A., & Sedikides, C. (2015, December). *Coach narcissism and athlete perceptions of coach behaviours: Associations with athlete basic psychological needs and attitudes toward doping.* Paper presented at The British Psychological Society: Division Sport & Exercise Psychology (DSEP) Conference symposium "Coaching in sport: Contrasting theories and methodologies" chaired by Ian Boardley, Leeds, UK.
2. **Matosic, D.**, Ntoumanis, N., Boardley, I.D., & Sedikides, C. (2015, July). *Coach narcissism, athlete perceptions of coach behaviour, psychological need satisfaction/thwarting and attitudes toward doping*. Poster presented at 14th European Congress of Sport Psychology (FESPSAC), Bern, Switzerland.

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4. **Matosic, D.,** Ntoumanis, N., Stewart, B., & Sedikides, C. (2014, June). *Antecedents of autonomy-supportive and controlling behaviours within self-determination theory: A systematic review.* Oral presentation at ESRC Student Led 3rd Midlands DTC Conference, University of Birmingham, Birmingham, UK.

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CHAPTER 1

GENERAL INTRODUCTION

The social environment (i.e., coaches, parents, teammates) surrounding athletes may be important in determining the quality and longevity of athletes' sport experiences. An important social factor shown to play a major role in shaping athletes' motivation, performance and well-being is the coach (Ntoumanis & Mallet, 2014). Importantly, coaches engage in numerous behaviours that can be crucial to athlete development, such as rewarding desired behaviour, providing athletes with feedback, and emphasising the importance of specific tasks within training and competition (Amorose, 2007). Such coaching behaviours can be encapsulated within specific interpersonal styles (i.e., sets of behaviours) that have been shown to have important implications for both desirable (e.g., well-being), and undesirable (e.g., ill-being) outcomes for athletes (Ntoumanis, 2012).

Understanding potential influences that lead to coaches adopting certain interpersonal styles and the psychological factors that may explain how such influences lead to adoption of these behaviours is of crucial importance. Additionally, those interpersonal styles have potential influences on desirable and undesirable outcomes for athletes and coaches. One theoretical framework relevant for informing research aimed at investigating the mechanisms that may lead to the adoption of certain interpersonal styles in sport coaches is self-determination theory (SDT).

Overview of Self-Determination Theory

Self-determination theory is a theory of human motivation and personality relevant to personal growth and development (Deci & Ryan, 1985). SDT is an organismic dialectic theory, that is, a theory that describes individuals as organisms that are active and oriented toward their personal growth and development of their self (i.e., organismic aspect; Ryan & Deci, 2002). These individuals strive for situations where they can actualise their abilities and potentials which can be influenced by social-contextual factors that can either enhance or

diminish their individual growth (i.e., dialectic aspect; Ryan & Deci, 2002). In comparison to other theories, such as, humanistic, developmental, and psychoanalytical theories that focus on one's psychological growth and self, or cognitive and behavioural theories that focus on one's responsible behaviours, SDT is a theory that integrates organismic and dialectic aspects of personality growth and development (Ryan & Deci, 2002). SDT argues that, in order to achieve effective functioning and desired development, individuals engage in social contexts that facilitate their optimal human functioning and increase their quality of motivation and psychological well-being (see Figure 1.1; Ryan & Deci, 2002). Engagement in different social contexts may be influenced by one's personality (Mageau & Vallerand, 2003).

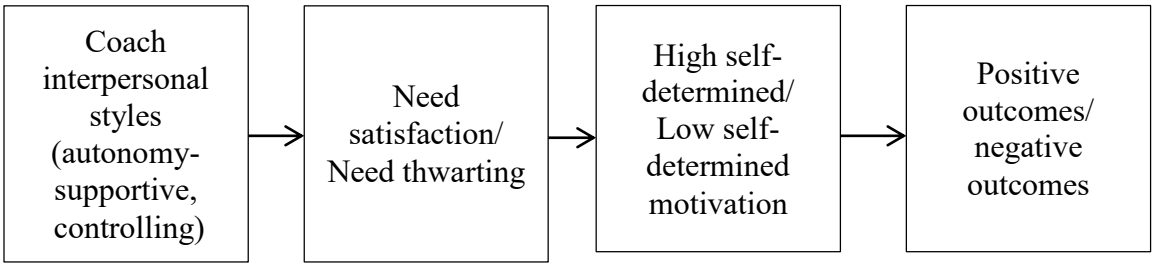


Figure 1.1. SDT motivational model (Vallerand & Losier, 1999)

Individuals in positions of authority represent social factors with the potential to support or frustrate others' optimal human functioning (Ryan & Deci, 2002). Applying SDT to the sport context, coaches represent key authority figures whose motivation-related behaviours may influence athlete optimal functioning (Vallerand & Losier, 1999). These specific behaviours can broadly be categorised into two interpersonal styles: need supportive and controlling (Occhino, Mallet, Ryanne, & Carlisle, 2014). Need supportive interpersonal style supports athletes basic psychological needs by creating environments with appropriate structure (i.e., setting clear directions to others regarding expectations; Jang, Reeve, & Deci,

2010), that are high in interpersonal involvement (i.e., caring about others; Connell & Wellborn, 1991) and are autonomy-supportive (i.e., providing others with choices, feelings of volition, and the freedom to self-regulate their own behaviours; Ryan & Deci, 2002). In the sport context, an autonomy-supportive interpersonal style has been the most widely examined type of coaching style (Amorose, 2007). Autonomy-supportive behaviours represent various behaviours (e.g., acknowledging perspective, providing a rationale) with the potential to enhance one's feelings of volition and promote an internal locus of causality (Reeve, Nix, & Hamm, 2003).

In contrast, coaches with controlling interpersonal style can undermine and frustrate athletes' optimal functioning by creating environments that forcefully pressurise and impose particular ways of thinking, feeling, and behaving upon athletes (Bartholomew, Ntoumanis, & Thøgersen-Ntoumani, 2009; Ryan & Deci, 2000). According to Bartholomew et al. (2009), controlling coaches use various controlling strategies to influence their athletes, such as tangible rewards (e.g., medals or money), controlling feedback (e.g., criticism), excessive personal control (e.g., imposing opinions, controlling statements), intimidation behaviours (e.g., yelling, belittling), ego-involvement (e.g., normative comparisons, public evaluation), and conditional regard (e.g., guilt-inducing statements). Controlling interpersonal style has been widely examined in educational and parental literatures of SDT (e.g., Grolnick & Apostoleris, 2009; Reeve, 2009), however, its investigation within sport has received less attention and, as such, warrants further examination.

Basic psychological needs theory (BPNT), a sub-theory of SDT, defines three basic psychological needs (i.e., autonomy, competence and relatedness) that individuals experience when they engage in an activity. Autonomy is the need to feel volitional (deCharms, 1968), competence is the need to feel skilled (White, 1959), and relatedness is the need to feel

connected to others when engaging in an activity (Baumeister & Leary, 1995). Autonomy-supportive interpersonal style had been shown to be beneficial to individuals' satisfaction of these basic psychological needs that further results in high self-determined motivation and positive outcomes [i.e., cognitive (e.g., high dispositional flow), affective (e.g., positive affect) and behavioural (e.g., persistence); Ryan & Deci, 2002]. Additionally, perceptions of basic psychological needs may be actively damaged and obstructed as a result of social contextual influences and this is referred to as needs thwarting (Bartholomew, Ntoumanis, Ryan, Bosch, & Thøgersen-Ntoumani, 2011a; Ryan & Deci, 2000) or need frustration (Vansteenkiste & Ryan, 2013). Need frustration describes individuals feeling oppressed, inadequate, or rejected as a result of actions of others (Bartholomew, Ntoumanis, Ryan, & Thøgersen-Ntoumani, 2011b). Controlling interpersonal style has been shown to be detrimental for individuals' need satisfaction. When basic psychological needs are frustrated, individuals engage in an activity due to low self-determined regulations. SDT literature on need frustration has extensively shown detrimental outcomes such as emotional and body image-related outcomes (e.g., negative affect, eating disorders; Bartholomew et al., 2011a); however research on morality-related outcomes has been scarce.

Although scarce, limited research has investigated morally relevant research questions using SDT. Such research has been based on the argument that peoples' moral behaviour may be influenced by social-contextual factors (e.g., coach interpersonal style; satisfaction/ frustration of the basic psychological needs) and personal motivation toward the activity (e.g., self-determined/non-self-determined; Ntoumanis & Standage, 2009; Vallerand & Losier, 1994). Empirical research testing these propositions has largely provided support for them. For example, it has been shown that athletes who perceive their coaches as controlling are more likely to morally disengage (Hodge & Gucciardi, 2015; Hodge & Lonsdale, 2011), and

that increased moral disengagement may result in more positive attitudes toward doping (Gucciardi, Jalleh, & Donovan, 2011; Hodge, Hargreaves, Gerrard, & Lonsdale, 2013). However, these studies did not examine the role of athlete need frustration in relation to morally-relevant outcomes. Thus, to extend on the existing research, the current line of research sought to examine the direct relations between social-contextual factors (i.e., need frustration, controlling coach behaviours) and morally-relevant outcomes (i.e., attitudes toward doping, coach moral disengagement).

According to SDT (Ryan & Deci, 2002), there are three major forms of motivation (i.e., amotivation, extrinsic motivation, and intrinsic motivation). Amotivation represents a lack of motivation, and is evident when someone is passive and without interest and desire for an activity. Extrinsic motivation includes four types of regulations, that is, external regulation (i.e., individuals engage in an activity to satisfy external demand or obtain a reward), introjected regulation (i.e., individuals engage in an activity to avoid guilt and shame, gain social approval, or enhance their ego and feelings of worth), identified regulation (i.e., individuals engage in an activity because they identify with the purpose and importance of the behaviour), and integrated regulation (i.e., individuals engage in an activity because it is a part of their identity and self). Finally, intrinsic motivation is a form of motivation where individuals engage in an activity only for internal reasons, such as to experience enjoyment, pleasure, and fun. These regulations range from low self-determined to high self-determined based on the amount of internalisation and integration in one's self they incorporate. Amotivation represents non-self-determined motivation (absence of extrinsic and intrinsic motivation), external regulation and introjected regulation represent low self-determined motivation (i.e., controlled), and identified regulation, integrated regulation, and intrinsic motivation represent high self-determined motivation (i.e., autonomous).

Relevant research in sport has supported a positive relation between autonomy-supportive behaviours and satisfaction of basic psychological needs (Adie, Duda, & Ntoumanis, 2012; Bartholomew et al., 2011; Gagné, Ryan, & Bargmann, 2003), as well as a positive relation between autonomy-supportive behaviours and high self-determined motivation (Amorose & Anderson-Butcher, 2007; Gillet, Vallerand, Amoura, & Baldes, 2010; Joesaar, Hein, & Hagger, 2012; Matosic & Cox, 2014). Both satisfaction of basic psychological needs and high self-determined motivation have been shown to relate to positive outcomes (Bartholomew et al., 2011a; Lonsdale, Hodge, & Rose, 2008; Pelletier, Fortier, Vallerand, & Briére, 2001). Additionally, research in sport has revealed a positive relation between controlling behaviours and frustration of basic psychological needs (Balaguer et al., 2012; Bartholomew et al., 2011a), as well as a positive relation between controlling behaviours and low self-determined motivation (Pelletier et al., 2001). Very often, athletes do not favour controlling coach behaviours, but they abide by those which results in shifting athletes' perceived locus of causality from internal to external (Ryan & Deci, 2002). Athletes may feel obligated and pressured to satisfy their coach's desires and expectations, and as such, may experience need frustration, develop low self-determined motives, and engage in negative outcomes (Bartholomew et al., 2011a; Lonsdale et al., 2008; Sarrazin, Vallerand, Guillet, Pelletier, & Cury, 2002).

Considerable research has been conducted to determine whether autonomy-supportive and controlling interpersonal styles lie on opposite ends of one continuum, or if they are independent from each other and may co-occur (Silk, Morris, Kanaya, & Steinberg, 2003; Tessier, Sarrazin, & Ntoumanis, 2008). Overall, this work suggests the constructs are independent of each other (albeit moderately correlated), and therefore authority figures (e.g., coaches) may use a combination of the two styles (Matosic & Cox, 2014; Tessier et al., 2008).

In summary, coaches play a major role in shaping athletes' motivation and experiences. SDT focuses on autonomy-supportive and controlling interpersonal styles to understand the underlying mechanisms related to use of various coach behaviours. The degree to which coaches adopt autonomy-supportive behaviours determines the degree of psychological need satisfaction experienced by athletes, and indirectly, the quality of their self-determined motivation, and positive outcomes (e.g., well-being). Additionally, the degree to which coaches adopt controlling behaviours determines the degree of psychological need frustration experienced by athletes, and indirectly, their non-self-determined motivation, and detrimental outcomes (e.g., morality-related).

Antecedents of Coach Interpersonal Styles

Identifying antecedents of coach interpersonal styles could aid understanding of why coaches adopt different behaviours when looking to motivate their athletes (Occhino et al., 2014). Relevant to this topic, Mageau and Vallerand (2003) proposed a model of the coach–athlete relationship that specifies three categories of antecedents of coach behaviours: contextual factors, perceptions of others' behaviour/motivation, and personal factors. The contextual factors category includes social-environmental factors (e.g., job security, opportunities for professional development) and external pressures (e.g., administrative pressure, time constraints). For example, empirical research has found sport coaches to be controlling when they lack opportunities for their own professional development (Stebbings, Taylor, Spray, & Ntoumanis, 2012) or feel pressure from sports administrators for athletes to perform to a high standard (Rochhi, Pelletier, & Couture, 2013).

Next, the perceptions of others' behaviour/motivation category reflects how perceiving others' behaviour as being predominantly high self-determined or low self-determined can influence the interpersonal style coaches adopt. For example, coaches may

exhibit controlling behaviours because they perceive their athletes as largely low self-determined, or they could exhibit autonomy-supportive behaviours because they perceive their athletes as mainly self-determined (Rochhi et al., 2013). When athletes experience low self-determination, coaches may use controlling strategies to motivate them to perform well because coaches feel pressured to satisfy expectations of club administrators. Additionally, when athletes are self-determined, coaches may experience more freedom to use need supportive strategies to motivate their athletes, such as provide them with choice (Pelletier & Sharp, 2009).

Finally, the personal factors category reflects characteristics integrated within the self, such as individuals' beliefs about interpersonal style, internal pressures and individuals' well- and ill-being. For example, coaches experiencing ill-being may be more likely to adopt controlling behaviours, whereas those experiencing well-being may have an increased likelihood of adopting autonomy-supportive style (Stebbings, Taylor, & Spray, 2015). This is because coaches who experience negative affect are more nervous and upset, and thus, may be more susceptible to intimidate their athletes, compared to coaches who are experiencing positive affect and are enthusiastic and excited. The latter coaches may be more likely to provide their athletes with choice. Since antecedents of coach interpersonal styles have received scarce attention in the sport literature, a more thorough review of the antecedents of controlling and need supportive interpersonal styles is needed to identify additional antecedents that may make coaches more or less susceptible to the adoption of autonomy-supportive and controlling interpersonal style.

One such group of antecedents that requires further investigation in sport is 'personal factors'. More specifically, personality trait antecedents, a part of the personal factors category, are considered an important determinant of one's behaviour (Mount, Illies, &

Johnson, 2006). Personality traits may influence the likelihood of adopting autonomy-supportive and controlling interpersonal style. Specifically, leadership literature has explored dark aspects of one's personality traits in relation to adaptive and maladaptive behaviours (e.g., Kaiser, LeBreton, & Hogan, 2015; Lannin, Guyll, Krizan, Madon, & Cornish, 2014). However, there has been a lack of SDT-based research investigating the effect of such dark traits on controlling and autonomy-supportive behaviours.

Narcissism

One dark personality trait that has been widely researched in the leadership literature is narcissism (Rosenthal & Pittinsky, 2006). Although two types of narcissistic personality trait – grandiose and vulnerable – exist, the majority of research has focused on the grandiose type, as it is the most relevant to the personality of the general population. Grandiose narcissism has a conceptual overlap with coach interpersonal styles (i.e., controlling coach behaviours) that is not shared with most other personality traits, and as such was the focus of the current thesis. The existing conceptual overlap is discussed in this section.

Grandiose narcissism is a manipulative and self-centred interpersonal personality trait (Emmons, 1987). It is a multidimensional concept characterised by entitlement, exhibitionism, exploitativeness, superiority, vanity, self-sufficiency and authority. Grandiose narcissism (hereafter referred as narcissism or overall narcissism) has been extensively researched in the leadership literature (Rosenthal & Pittinsky, 2006; Schoel, Stahlberg, & Sedikides, 2015), and linked with negative leadership qualities such as arrogance, lack of moral sensibility, and anger (Grijalva, Harms, Newman, Gaddis, & Fraley, 2015; Rosenthal & Pittinsky, 2006). An explanation for these negative qualities may lie in the psychological components that underlie narcissists' behaviours (Rosenthal & Pittinsky, 2006). Narcissistic individuals generally aim to assume leadership positions when socially interacting with others

because their conversational dominance and perceived overconfidence allows them to be recognised as leaders (Brunell et al., 2008; Campbell, Goodie, & Foster, 2004). Also, they strive for attention and admiration through a focus on promoting their self-enhancement (Campbell, Brush, Brunell, & Shelton, 2005; Campbell & Foster, 2007; Morf, Horvath, & Torchetti, 2011), and lack moral sensibility due to preoccupation with the self (Roberts, 2007). Narcissistic leaders relentlessly seek out validation because of their insecurity and search for situations where they can exhibit superiority and authority over others (Gregg & Sedikides, 2010; Morf & Rhodewalt, 2001). Narcissistic individuals believe they are extraordinary and special (e.g., self-sufficient) and they feel entitled to exploit others for personal benefit (Campbell, Hoffman, Campbell, & Marchisio, 2011; Raskin & Terry, 1988). As narcissism provides an opportunity for leadership and power it could be a potential attraction to coaching.

Narcissism is a personality trait that has been linked with numerous maladaptive behaviours (e.g., hostility, aggression; Bushman & Baumeister, 1998; Sedikides, Campbell, Reeder, Elliot, & Gregg, 2002). These deleterious behaviours are proposed as outcomes of narcissistic personality trait rather than being part of it. For instance, narcissistic leaders are often authoritarian, do not tolerate criticism, take advantage of others, are easily threatened and respond to such threats with aggression (Morf et al., 2011; Sedikides et al., 2002). Further, an abundance of literature supports a positive relation between narcissism and aggression (e.g., Blinkhorn, Lyons, & Almond, 2016; Bushman & Baumeister, 1998), as well as belittlement of other individuals in interdependent tasks (Sedikides et al., 2002; Stucke, 2003). Based on similarities between these behaviours and controlling coach behaviours, it is possible that narcissism may also be positively linked with controlling behaviours. For instance, coaches who engage in controlling behaviours belittle their athletes when their

expectations are not met and they ignore their athletes' perspectives by imposing their own (i.e., coaches) values and opinions (Bartholomew et al., 2009). Further, leaders high in narcissism seek out highly competitive situations that provide them opportunities for admiration (Mathieu & St-Jean, 2013; Woodman, Roberts, Hardy, Callow, & Rogers, 2011). Similarly, coaches who engage in controlling behaviours particularly enjoy competition focusing on the winning aspects of it (Bartholomew et al., 2009). Finally, leaders high in narcissism appear to be energised by others, but become hostile and aggressive when their plans turn ineffective (Sedikides et al., 2002). Coaches who engage in controlling behaviours provide attention and support for their athletes when things are going well, but utilise guilt-inducing statements when athletes do not perform well (Bartholomew et al., 2009). However, as a distinct category of behaviours specific to sport coaching, controlling coach behaviours are similar to, but yet distinct from other types of deleterious leadership behaviours (e.g., aggression, belittlement) associated with narcissism. Based on the arguments proposed here, it is plausible to suggest that increased narcissism in coaches will be linked to increased frequency of controlling behaviours during coaching.

Although there is an established positive link between narcissism and controlling-type behaviours (e.g., aggression; Bushman & Baumeister, 1998), its association with adaptive behaviours (e.g., autonomy-supportive behaviours) has received far less research attention. Due to preoccupation with the self and insufficient consideration of others, narcissistic individuals are reluctant to use adaptive behaviours such as helping others (Lannin et al., 2014). Conceptually, helping behaviours are aligned with autonomy-supportive behaviours. Specifically, autonomy-supportive behaviours such as providing rationale, offering encouragement, and being responsive to questions are forms of helping behaviours (Deci,

Egharri, Patrick, & Leone, 1994). As such, it is possible that increased narcissism in coaches may be linked with decreased frequency of autonomy-supportive behaviours during coaching.

Two sub-dimensions of grandiose narcissism have been used to identify more and less adaptive forms of narcissism, and have been termed adaptive grandiose and maladaptive grandiose narcissism (hereafter referred to as adaptive and maladaptive narcissism, respectively). Maladaptive narcissism includes entitlement, exhibitionism, exploitativeness aspects of narcissism, whereas adaptive narcissism includes self-sufficiency and authority aspects of narcissism (Emmons, 1984; Raskin & Terry, 1988). The literature has revealed that maladaptive narcissism has been positively associated with poor social adjustment such as hostility and aggression, whereas adaptive narcissism was unrelated to social maladjustment, when controlling for maladaptive narcissism (Barry, Frick, & Killian, 2003). Hence, it is possible to suggest that maladaptive narcissism - but not adaptive narcissism – will positively predict controlling coach interpersonal style.

In summary, narcissism may be an important predictor of controlling and autonomy-supportive coach interpersonal styles. Coach narcissism may be positively linked with implementation of controlling coach behaviours, and negatively linked to autonomy-supportive behaviours. However, although these relations may be direct, they could also be mediated by other factors. As such, to more comprehensively explore the possible relations between narcissism and coaches' interpersonal styles, it is important to identify and investigate potential indirect effects that may act as explanatory mechanisms for any such relations.

Potential Mediators between Coach Narcissism and Interpersonal Styles

In line with literature on narcissistic leaders, one such mechanism may be empathy (Rosenthal & Pittinsky, 2006). Empathy represents one's responses to another's experiences

where understanding and experiencing others' feelings and well-being contributes to social and moral development (Hare, 1993). Empathy incorporates cognitive (i.e., perspective taking) and affective (i.e., empathic concern) components (Davis, 1983). Specifically, the perspective taking component represents the ability to adopt the psychological view of others, whereas the empathic concern component depicts the ability to process others' emotions and feel compassion and sympathy (Davis, 1983). Empathic concern is "other-oriented" empathy, suggesting that individuals who lack empathic concern may lack the ability to experience the negative emotional outcomes of their behaviour for others. Theoretically, empathic concern acts as an internal control whereby experiencing others' emotions encourages and represses adaptive and maladaptive behaviours, respectively (Hare, 1993; Miller & Eisenberg, 1988). Narcissistic individuals lack the ability to share their emotions with others, and as such, lack of empathic concern can account for their need to exploit others and increased frequency of engagement in maladaptive behaviours (Hepper, Hart, Meek, Cisek, & Sedikides, 2014a; Hepper, Hart, & Sedikides, 2014b; Miller & Eisenberg, 1988).

Relevant literature has identified a negative relation between narcissism and empathic concern (Trumpeter et al., 2008). It was found that narcissistic individuals experienced reduced empathic concern when interacting with others. A recent meta-analysis exploring empathy and aggression revealed a weak negative association between empathic concern and aggression (Vachon, Lynam, & Johnson, 2014). Individuals who lacked emotional responses toward others (i.e., empathic concern) were more likely to act without regard for others' feelings and were more motivated to exhibit aggression (Vachon et al., 2014). Given the previously discussed links between aggression and controlling behaviours (Bartholomew et al., 2009), it is possible that narcissism in coaches may lead to increased use of controlling behaviours as a result of reduced empathic concern.

Empathic concern may also be important in explaining possible links between narcissism and autonomy-supportive coach behaviours. Empathic concern is a form of empathy where individuals have the ability to share other's emotions and sympathy and, as such, may be considered an indicator of autonomy-supportive behaviours, such as being responsive to another person's questions and offering advice (Reeve & Jang, 2006; Soenens, Duriez, Vansteenkiste, & Gooddens, 2007). Empathic concern has been positively associated with adaptive behaviours, such as helping or supporting others (Eisenberg & Miller, 1987). For example, Davis (1983) identified a positive link between empathic concern and helping others by contributing time and effort to others. Such adaptive behaviours are considered to be consistent with autonomy-supportive coach behaviours (Gagné et al., 2003). As such, it is possible that reduced empathic concern in coaches with higher narcissism may in part explain a decreased likelihood to engage in autonomy-supportive behaviours.

Another important characteristic with the potential to explain the effects of narcissism on coach behaviours is power. Power is defined as the ability to influence and dominate others and it is one of the most important features of narcissistic leaders (Rosenthal & Pittinsky, 2006). Given their increased concern with power (Campbell, Rudich, & Sedikides, 2002), it is no surprise that narcissistic individuals have been shown to manipulate their social environments to increase the power they exert over others (Horton & Sedikides, 2009). In the literature, power consists of three sub-components including status, authority, and dominance (Keltner, Gruenfeld, & Anderson, 2003). Of these three sub-components, dominance may be the most relevant to coach behaviours. Dominance reflects the ability to influence and control others by controlling their resources and implying superiority over them. In interpersonal relations, dominance is considered one of the main dimensions underlying social interaction (Keltner et al., 2003; Sedikides et al., 2002). Narcissistic leaders use dominance in the

interaction with their subordinates, as it encompasses self-aggrandizing, pressurising, harassing, and intimidating features of one's personality (Emmons, 1984; Reijntjes et al., 2016). As such, dominance may be most likely to explain possible effects of coach narcissism on controlling coach behaviours.

Findings outside of sport (Ojanen, Findley, & Fuller, 2012) have shown that the effect of narcissism on controlling-type behaviours (e.g., aggression, hostility) may be explained by dominance. Specifically, narcissistic individuals engage in aggressive behaviours to exert dominance over subordinates. Additionally, in a study with undergraduate university students, Raskin, Novacek, and Hogan (1991) demonstrated that dominance mediated a positive effect of narcissism on antisocial behaviour (e.g., hostility).

Dominance is a characteristic that entails pressuring and harassing displays. As such, it is more relevant to controlling behaviours, compared to autonomy-supportive behaviours. Autonomy-supportive behaviours have a main aim of supporting others, not dominating them (Deci et al., 1994), therefore it is possible that dominance in coaches with higher narcissism may explain an increased likelihood to engage in controlling behaviours, but not in autonomy-supportive behaviours.

Additional important characteristics with the potential to explain the relation between narcissism and coach interpersonal styles are beliefs about interpersonal style. In line with SDT, Reeve et al. (2014) examined the effectiveness and normalcy beliefs regarding autonomy-supportive and controlling interpersonal style as potential antecedents of autonomy-supportive and controlling behaviours. According to Reeve et al. (2014), effectiveness beliefs are beliefs about how effective or ineffective an interpersonal style is believed to be, whereas normalcy beliefs are beliefs about how normative an interpersonal style is within a life domain (i.e., schools, sport). The latter beliefs inform individuals in

positions of authority (e.g., teachers, coaches) which interpersonal style is a norm (Reeve et al., 2014). Effectiveness and normalcy beliefs about controlling interpersonal style may be a justificatory mechanism for coaches' use of controlling behaviours. As such, in order to predict the use of controlling behaviours, we need to understand the beliefs about these behaviours.

The effectiveness and normalcy beliefs about coach interpersonal styles were explored within education literature. Reeve et al. (2014) found a positive association between teachers who believed controlling interpersonal style was normative and effective, and controlling behaviours. This could be because teachers believe that controlling behaviours may promote students' engagement and are the norm set by school authorities (Barrett & Boggiano, 1988; Boggiano, Barrett, Wiher, McClealland, & Lusk, 1987). Since individuals higher in narcissism report more frequent engagement in controlling-type behaviours (e.g., aggression, Sedikides et al., 2002), they may hold favourable beliefs about the effectiveness of controlling interpersonal style, and also view them as normal and accepted. Empirical research has shown that higher levels of narcissism are positively related to normalcy beliefs about aggression, and as such, have been linked to more frequent engagement in aggressive behaviours (Blinkhorn et al., 2016). Additionally, narcissistic individuals engage in aggressive behaviours because they consider them effective (Grijalva et al., 2015). Overall, these findings could be relevant to the sport context, as effectiveness and normalcy beliefs about interpersonal styles may help explain why some coaches engage in controlling behaviours.

In summary, the relations between narcissism and coach interpersonal styles may be explained through empathic concern, dominance, and effectiveness and normalcy beliefs about interpersonal style. Higher narcissism may be linked with controlling behaviours via reduced empathic concern, high dominance, and strong effectiveness and normalcy beliefs

about controlling interpersonal style. Additionally, higher narcissism may be linked with decreased autonomy-supportive behaviours via reduced empathic concern. As well as aiming to understand antecedents of coach interpersonal styles and its psychological mechanism, it is important to investigate their outcomes. Thus, next section will review the outcomes of coach interpersonal styles investigated in the current thesis.

Outcomes of Coach Interpersonal Styles

Controlling behaviours can positively influence frustration of athletes' needs (Ntoumanis, 2012) and may result in detrimental athlete outcomes. Morality-related outcomes have received scarce attention within SDT literature and, as such, the current thesis examines attitudes toward doping and moral disengagement. A morality-related outcome potentially resulting from need frustration in sport is attitudes toward doping. Doping is a planned and deliberate behaviour with the aim of improving athletic performance (Petróczi, 2013a) that may have negative and harmful effects on athletes' health (Petróczi & Aidman, 2009). Favourable attitudes toward doping are key psychological predictors of doping (Lazuras, Barkoukis, Rodafinos, & Tzorbatzoudis, 2010; Ntoumanis, Ng, Barkoukis, & Backhouse, 2014; Petróczi & Aidman, 2009), because they regard the use of performance enhancement drugs as ethical, beneficial, and useful (Petróczi & Aidman, 2009).

A potential explanation for athletes developing favourable attitudes toward doping is the influence of their coach (Smith et al., 2010). Athletes who perceive their coaches as controlling may experience frustration of their basic psychological needs, and as such, those athletes may develop positive attitudes toward doping as a mean for performing well and, ultimately, satisfying their coaches' expectations. Hodge et al. (2013) argued that athletes who perceive their coach as controlling would do anything to succeed and gain their coach's approval, which could result in athletes developing more positive attitudes toward doping.

Hodge et al. additionally examined whether non-self-determined motivation potentially explains the relation between athletes' perceptions of controlling behaviours and attitudes toward doping, and did not find any significant effect. This could be due to basic psychological needs being the potential mediator mechanism, and not motivational regulations. Controlling coaches may frustrate athletes' needs (e.g., competence and relatedness), and as such, athletes may feel susceptible to develop positive attitudes toward doping to increase their performance (i.e., to restore their need for competence) and satisfy their coach expectations (i.e., to restore their need for relatedness; Radel, Pelletier, Sarrazin, & Milyavskaya, 2011). Thus, the link between athletes' perceptions of controlling coach behaviours and attitudes toward doping via need frustration warrants further investigation.

Another morality-related outcome that may result from controlling coach behaviours is coach moral disengagement. Moral disengagement is a collective term outlining eight psychosocial mechanisms (see Boardley & Kavussanu, 2007 for applications to sport) – collectively referred to as mechanisms of moral disengagement – that allow individuals to transgress moral standards without anticipating negative emotions such as guilt, and therefore facilitating engagement in such conduct (Bandura, 2002). Moral disengagement can be used socially to rationalise or justify one's deterring action to others (Bandura, 2016). Therefore, coaches who use controlling strategies with their athletes may utilise moral disengagement more frequently to justify and explain their use of controlling behaviours to others. As such, use of controlling coach behaviours may lead to increased use of moral disengagement. The sport literature on moral disengagement has reported a positive relation between perceptions of controlling behaviours and athlete moral disengagement (Hodge & Gucciardi, 2015; Hodge & Lonsdale, 2011; Hodge et al., 2013). However, to date researchers have not examined whether controlling coach behaviours are linked with increased coach moral disengagement.

In summary, controlling behaviours can frustrate athletes' basic psychological needs and produce detrimental coach and athlete outcomes related to morality. According to the literature, athletes' perceptions of controlling coach behaviours may lead to favourable attitudes toward doping through athlete need frustration. Additionally, controlling behaviours may result in coach moral disengagement. Morality-related outcomes have received scarce attention in the SDT literature and, as such, research is needed to establish how controlling coach behaviours may lead to such outcomes.

Summary and Impetus for Research Programme

The antecedents of coach interpersonal styles have been under-investigated within SDT sport literature. As such, research is needed that identifies and investigates factors that potentially result in coaches exhibiting controlling or autonomy-supportive interpersonal style. One of the factors that needs investigation is the role of narcissism as an antecedent of coach interpersonal styles. Relations between narcissism and coach interpersonal style could be direct, but may also be explained via indirect effects that may act as explanatory mechanisms for direct effects between narcissism and coach interpersonal styles. These include empathic concern (Trumpeter et al., 2008), dominance (Raskin et al., 1991), and effectiveness and normalcy beliefs about interpersonal style (Reeve et al., 2014). As well as aiming to further understand antecedents of coach interpersonal styles, it is important to investigate key outcomes of these interpersonal styles, such as need frustration (Bartholomew et al., 2011a), athlete attitudes toward doping (Hodge et al., 2013), and coach moral disengagement (Bandura, 2016).

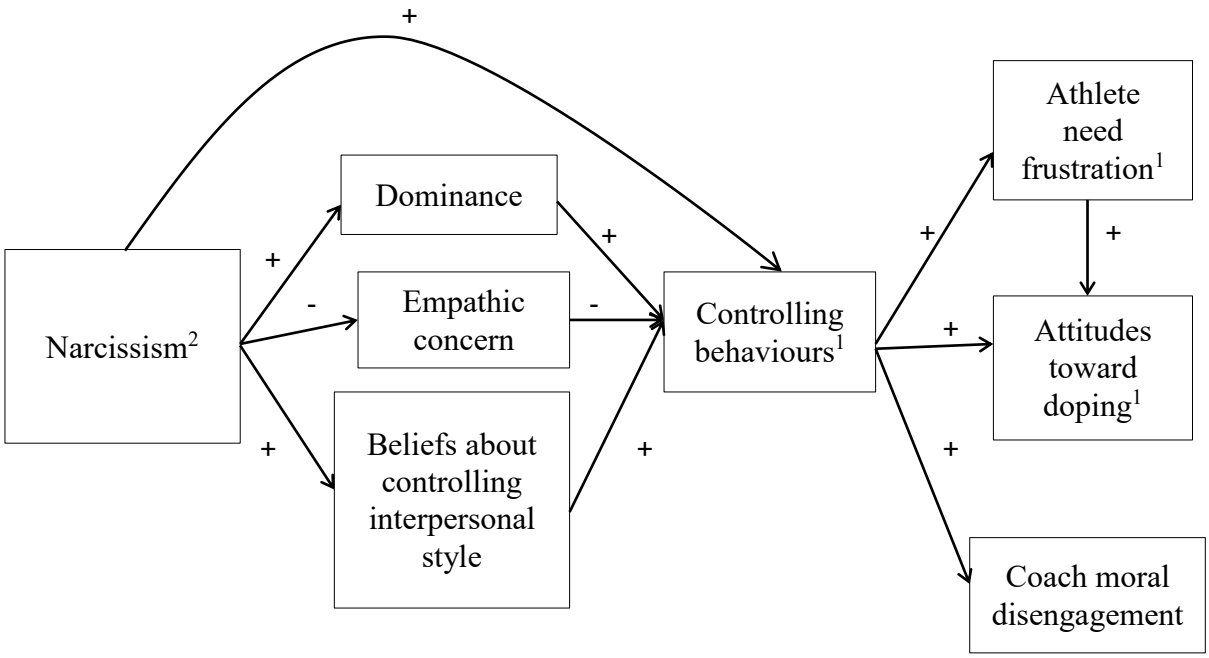
Based upon the arguments and evidence presented to this point, the present research sought to: (1) review the SDT literature on antecedents of controlling and need supportive interpersonal styles, (2) explore whether one potential such antecedent – narcissism – predicts

coach interpersonal styles, (3) explore possible indirect effects between narcissism and coach interpersonal style that may also act as explanatory mechanisms for direct effects identified between narcissism and coach interpersonal styles, and (4) investigate outcomes of coach interpersonal styles related to problematic moral functioning in athletes and coaches.

These aims have been explored through a systematic review and three empirical studies. The conceptual model outlining the hypothesised relations between variables examined in the current thesis are shown in Figure 1.2. Chapter 2 synthesises research on the antecedents of need supportive and controlling interpersonal styles within educational, parental, sport, workplace, and health domains. The review discusses how these antecedents impact upon the type/s of interpersonal style adopted, and in doing so identifies additional potential antecedents of coach interpersonal styles. Chapter 3 examines the negative link between self-reported narcissism and autonomy-supportive and a positive link between narcissism and controlling interpersonal styles in sport coaches. Additionally, it examines whether coach empathic concern and dominance mediate the positive effect of narcissism on controlling interpersonal style, and whether empathic concern mediates the negative effect of narcissism on autonomy-supportive interpersonal style (see Figure 1.2). Chapter 4 examines the relations between coach self-reported narcissism, empathic concern, and dominance; and athletes' perceptions of controlling coach behaviours, athletes' reports of need frustration, and the latters' attitudes toward doping. Specifically, it examines whether coach empathic concern and dominance mediate the positive effect of narcissism on athletes' perceptions of controlling coach behaviours at the between-level, and whether athletes' reports of need frustration mediate the positive effect of athletes' perceptions of controlling coach behaviours on attitudes toward doping at the within- and between-levels (see Figure 1.2). Finally, Chapter 5 examines the role of narcissism and its two facets (i.e., adaptive and maladaptive

narcissism) and beliefs about effectiveness and normalcy of controlling interpersonal style in predicting controlling coach behaviours and coach moral disengagement. Specifically, it examines whether beliefs about effectiveness and normalcy of controlling interpersonal style mediate the positive effect of narcissism and its two facets on controlling coach behaviours. Additionally, it examines the positive effect between controlling coach behaviours and coach moral disengagement (see Figure 1.2).

Controlling behaviours



Autonomy-supportive behaviours

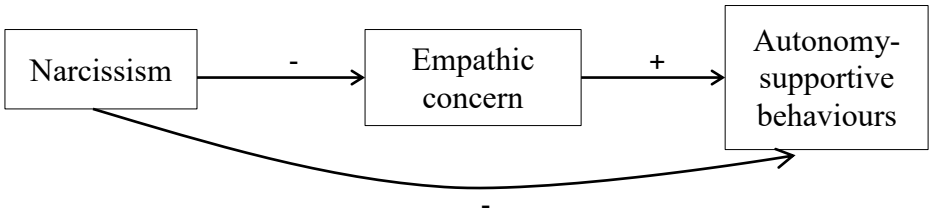


Figure 1.2. Thesis conceptual model outlining the hypothesised relations between the variables examined in the current thesis. *Note*. [1]The relations between controlling behaviours-need frustration-attitudes toward doping were measured at the within- and between-levels. [2] Narcissism was bifurcated into adaptive and maladaptive facets in one study.

CHAPTER 2

ANTECEDENTS OF NEED SUPPORTIVE AND CONTROLLING INTERPERSONAL STYLES FROM A SELF-DETERMINATION THEORY PERSPECTIVE: A REVIEW AND IMPLICATIONS FOR SPORT PSYCHOLOGY RESEARCH

Parts of this chapter have been published as a book chapter under the following reference: Matosic, D., Ntoumanis, N., & Quested, E. (2016). Antecedents of need supportive and controlling interpersonal styles from a self-determination theory perspective: A review and implications for sport psychology research. In M. Raab, P. Wylleman, R. Seiler, A. M. Elbe, & A. Hatzigeorgiadis (Eds.), *Sport and exercise psychology research: From theory to practice* (pp. 145-180). Elsevier.

Abstract

The purpose of this review was to identify the antecedents of two interpersonal styles adopted by coaches proposed in self-determination theory (SDT; Ryan & Deci, 2002), namely need supportive and controlling styles. The degree to which individuals in positions of authority or leadership (e.g., coaches) adopt a communication style that is need supportive and/or controlling determines the degree of psychological need satisfaction experienced by people they interact with (e.g., athletes), and indirectly the quality of their motivation, well-being and behavioural engagement. Much more is known about the consequences of these two styles as opposed to their antecedents. This review addresses this issue by reviewing literature on this topic from the educational, parental, sport, work, and health domains. The relevance of these findings for sport is discussed and gaps in current knowledge are identified. Potential additional antecedents that may contribute to a more comprehensive understanding of why coaches adopt need supportive and/or controlling interpersonal styles are also proposed.

Coaches play an important role in shaping athletes' sport experiences and use a range of strategies in an effort to motivate athletes. The coach's "typical" interpersonal style is reflective of the combination of strategies he/she usually adopts when communicating with athletes. The predominant interpersonal style adopted by the coach is a critical determinant of athletes' quality of sport experience and motivation, psychological need satisfaction, performance, and psychological well-being (Duda & Appleton, 2016; Mageau & Vallerand, 2003). Drawing from self-determination theory (SDT; Ryan & Deci, 2002), a considerable body of literature has substantiated the consequences of need supportive and controlling coaching (for a review in sport setting, see Ntoumanis, 2012). However, less attention has been paid to understanding the antecedents of these two interpersonal styles proposed by SDT. This chapter will serve to review the antecedents of need supportive and controlling motivational styles that have been identified in research undertaken in educational, parental, sport, workplace, and health contexts. Our overarching goal is to facilitate research and practice to foster adaptive coaching practices that will nurture more adaptive motivation and positive sport experiences for athletes.

Need Supportive and Controlling Interpersonal Styles

SDT distinguishes between two broad interpersonal styles that hold relevance for the motivation and well-being of athletes (Ryan & Deci, 2002). These styles are reflected in a set of distinct behaviours when adopted by individuals in a position of authority or leadership. The coaches' interpersonal style will facilitate motivation and well-being when it is supportive of athletes' psychological need to feel autonomy (i.e., feeling a sense of free will, volition and choice in relation to sport participation), competence (i.e., feeling one is efficacious and can meet the challenges faced in sport) and a sense of relatedness (i.e., feeling socially connected to the coaches and teammates; Ryan & Deci, 2002). However, when

coaches actively thwart these basic needs, coaching can be considered controlling (Bartholomew, Ntoumanis, Ryan, Bosch, & Thøgersen-Ntoumani, 2011a). SDT proposes that coaches (or others in positions of authority/leadership) can support athletes' needs by creating a coaching environment that is high in autonomy support and interpersonal involvement, and has appropriate structure. A coaching style that is high in this trio of characteristics has been termed "need supportive" (Taylor & Ntoumanis, 2007). Autonomy support is evidenced when coaches provide opportunities for athletes to make meaningful choices, involve athletes in decision-making, acknowledge athletes' perspective and feelings, and provide meaningful rationales for their requests (Ntoumanis, 2012). Interpersonal involvement is demonstrated when individuals in a position of authority or leadership show care and concern (Connell & Wellborn, 1991). A structured environment is evident when the coach provides guidance, direction and organization that facilitate athletes' perceptions that they can meet the challenges of the activity and/or experience success. Thus, structure reflects coaches' provision of guidance and appropriate expectations in the learning process (Jang, Reeve, & Deci 2010; Skinner & Edge, 2002). In contrast, controlling coaching can be need teh and is evident when the coach intimidates athletes, exercises excessive personal control, uses rewards or praise in a controlling manner, and holds back on attention or support when athletes do not display required behaviours and when coaches actively undermine athletes' sense of self-worth (Bartholomew, Ntoumanis, & Thøgersen-Ntoumani, 2009).

Extensive research in sport (e.g., Bartholomew et al., 2011a) and other life settings has examined the relations between need supportive (primarily the autonomy support component) and controlling styles with motivational processes as proposed by SDT. Need supportive coaching has been associated with the satisfaction of three basic needs, namely the need for athletes to feel autonomous in their actions, competent, and meaningfully related to others

within the sport milieu (Adie, Duda, & Ntoumanis, 2012). A need supportive coaching style is also understood to be a critical determinant of behaviour regulation that is autonomous (or self-determined), that is, motivation that reflects intrinsic interest, task enjoyment, or task utility (Amorose & Anderson-Butcher, 2007). In contrast, a controlling coaching style has been linked with psychological need thwarting (Balaguer et al., 2012). Controlling coaching is understood to be a key antecedent of controlled (or nonself-determined) type of athlete motivation, that is, motivation that reflects internal or external contingencies such as coercion, pressure, or guilt (Pelletier, Fortier, Vallerand, & Brière, 2001).

Antecedents of Need Supportive and Controlling Interpersonal Styles

Despite repeated claims that SDT-based research in sport strives to foster more need supportive coaching and adaptive experiences for athletes, a paucity of attention has been paid to examining why coaches adopt need supportive and/or controlling styles. To date, only five studies have explored the antecedents of need supportive and controlling coaching in the sport domain (Iachini, 2013; Rocchi, Pelletier, & Couture, 2013; Stebbings, Taylor, & Spray, 2011; Stebbings, Taylor, Spray, & Ntoumanis, 2012; Stebbings, Taylor, & Spray, 2015). In the broader context of SDT, research on potential antecedent variables has been primarily undertaken in the educational and parental literatures (Deci, Spiegel, Ryan, Koestner, & Kaufmann, 1982; Grolnick, Price, Beiswenger, & Sauck, 2007; Reeve, 1998; Reeve et al., 2014). However, there has been no attempt to synthesise the evidence from these domains in an effort to further develop understanding of the primary determinants of coaches' interpersonal styles. Identifying the antecedents of motivationally adaptive versus maladaptive coaching styles could potentially explain why coaches adopt particular strategies to motivate their athletes (Occhino, Mallett, Rynne, & Carlisle, 2014). Importantly, such information could valuably contribute toward the design of interventions that aim to support

coaches in fostering more motivationally adaptive styles of interaction.

The purpose of this chapter is to synthesise findings from the extant research concerning the antecedents of need supportive and controlling interpersonal styles proposed by SDT. We discuss specifically how these antecedents may impact upon the types of interpersonal style adopted. The implications for future research in the broader SDT literature, as well as applications in the coaching domain are also highlighted. As an outcome of this review, we identify additional potential antecedents of coaches' interpersonal style.

To initiate our review, a search was conducted using the computerized databases Medline, PsycINFO, Web of Science, and Scopus, encompassing articles published from 1969 to April, 2015. The terms used in the search strategy were: (antecedent* OR determinant* OR predictor* OR context* factor OR social* factor OR personal* factor OR belief* OR causality orientation OR pressure) AND (control* OR controlling OR autonomy support* OR autonomy support* behavior OR autonomy support* behaviour OR control* behavior OR control* behaviour OR teach* style OR motivating style OR parent* style OR coach* style OR teach* orientation OR parent* orientation OR coach* orientation OR interpersonal style* OR structure OR involvement OR need support) AND (self determination OR self-determination).

The first author received training on database searching and completed all of the searches independently. Inclusion criteria were determined *a priori*. An antecedent of controlling and need supportive styles was defined as any factor identified in the SDT literature as predicting one or both interpersonal styles. Participants in the included studies were individuals in a position of authority or leadership (i.e., coaches, teachers, parents, supervisors, fitness instructors) of any age group, any experience, and either gender. Studies were excluded if one or more of the following criteria were not met: (1) SDT was not cited as

a theoretical framework that underpinned the research presented in the manuscript; (2) if the study did not describe antecedents of need supportive (i.e., autonomy support, and/or structure and/or interpersonal involvement) and/or controlling interpersonal styles, strategies, or behaviours; and (3) if the measures of need supportive and controlling interpersonal styles did not assess these variables as conceptualized by SDT (Figure 2.1).

Coding of study characteristics was conducted by the first author and a sample of codings were checked by the second author. Studies were coded for type of publication (i.e., published journal article, book chapter), design (e.g., cross-sectional, longitudinal, experimental), role of participants (e.g., coaches over athletes, parents over athletes, teachers over students, supervisors over employees, etc.), domain (i.e., educational, home, sport, work, and health), antecedents tested (e.g., perceived pressure from superiors, causality orientation), type of antecedent (i.e., contextual or personal factors, perceptions of the others' motivation), measure of need supportive and/or controlling behaviours (e.g., observation, self-report), and motivational style measured (i.e., autonomy support, structure, involvement and/or control; Table 2.1). Drawing from Mageau and Vallerand's (2003) motivational model of the coach-athlete relationship three broad categories of antecedents were also coded: contextual factors relevant to the coach, perceptions of others' behaviours and motivation, and personal factors (Figure 2.2 for a summary).

With regard to domain, the majority of the included empirical articles (20 out of 31) explored antecedents within educational contexts. The sport literature represented 5 out of 31 of the reviewed studies, the home context represented 4 out of 31, work literature characterized 1 out of 31, and health context represented 1 out of 31 of the identified articles. Three antecedent variables were explored within more than one context. These were external pressure, perceptions of others' self-determined motivation, and self-determined motivation of

the individual in a position of authority or leadership. For example, Rocchi et al. (2013) explored the external pressure antecedent in the sport literature, replicating the work of Pelletier, Seguin-Levesque and Legault's (2002) on external pressure in the education domain.

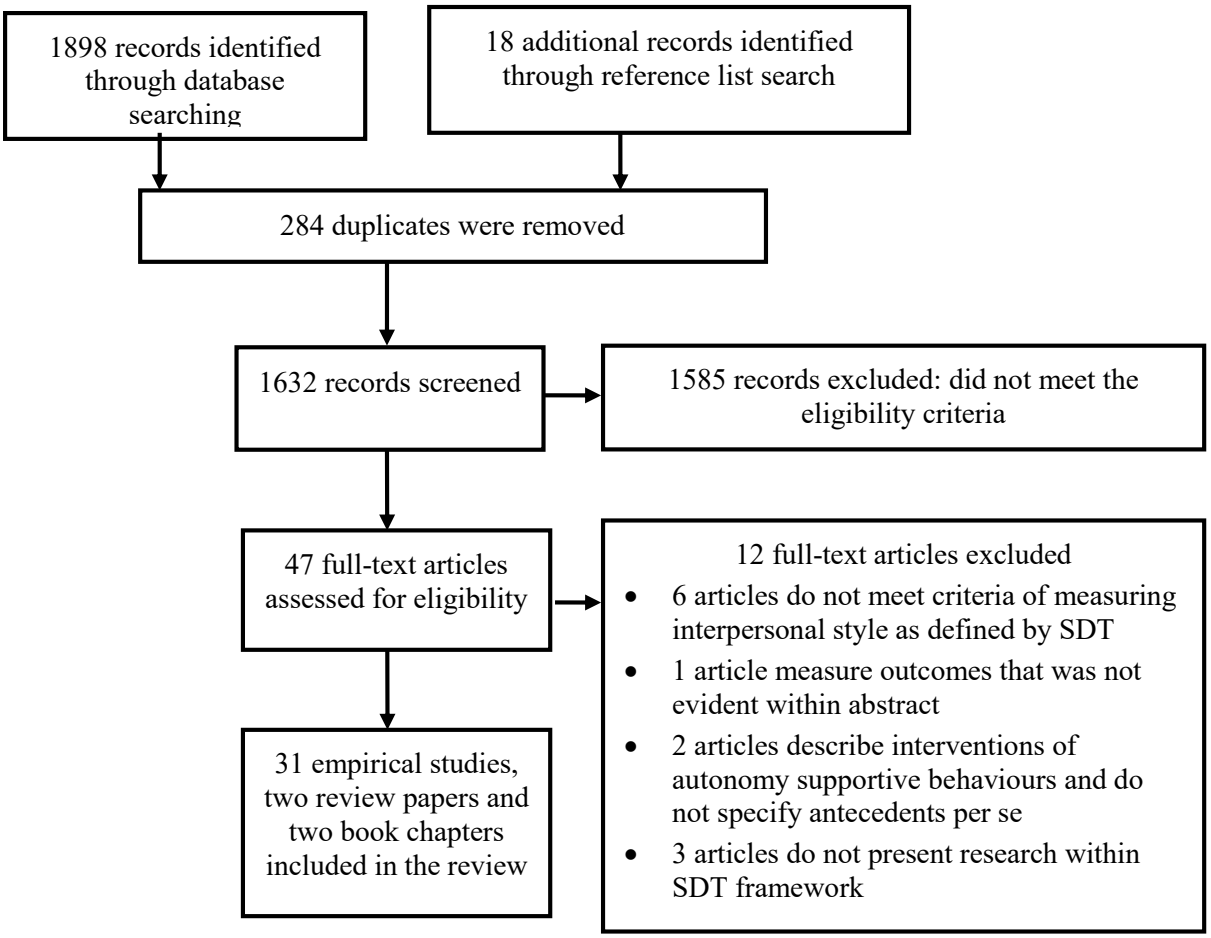


Figure 2.1. PRISMA flowchart describing the selection process in the systematic literature review (Moher, Liberati, Tetzlaff, & Altmann, 2009). The initial database search resulted in a total of 1898 articles. After duplicates were removed (n = 284), manuscript titles and abstracts were screened. Articles that did not meet inclusion criteria were removed (n = 1585). Postscreening, the full texts of the 29 remaining articles from the initial database search were assessed for eligibility using the same inclusion criteria. Seventeen articles were retained. A manual search from the reference lists of these full-text articles was subsequently conducted, adding 16 additional manuscripts and 2 book chapters. This selection process resulted in a total of 31 peer reviewed articles with empirical data (25 cross-sectional, 1 longitudinal and 5 experimental), 2 peer reviewed review articles and 2 book chapters that were included in this.

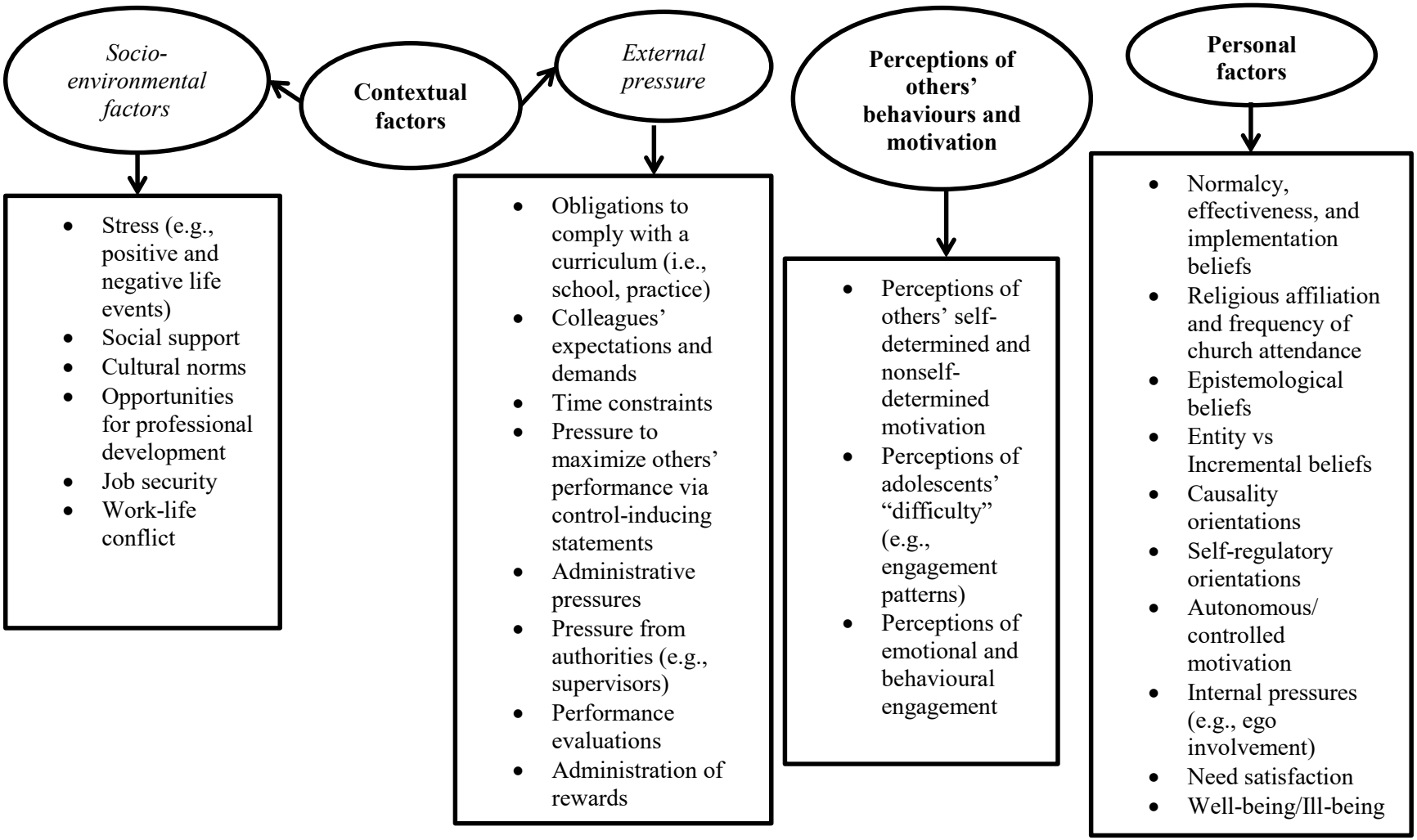


Figure 2.2. Summary of antecedents of controlling and need supportive behaviours identified within the SDT

Studies adopted different methods to measure whether the leader's behaviour was need supportive and/or controlling. Most (n = 20) of the studies reviewed utilized questionnaires completed by individuals in positions of authority or leadership (e.g., teacher, parent, coach). In these studies those individuals' self-perceptions of the need supportive and controlling motivational styles that they adopted were measured using adaptations of established questionnaires, such as the Problems in School Questionnaire (Deci, Shwartz, Sheiman, & Ryan, 1981), the Interpersonal Behaviors Scale (Beaudry & Pelletier, 2008), the Health Care Climate Questionnaire (HCCQ; Williams, Grow, Freedman, Ryan, & Deci, 1996), or the Controlling Coach Behaviors Scale (CCBS; Bartholomew, Ntoumanis, & Thøgersen -Ntoumani, 2010). Three studies (Pelletier & Vallerand, 1996; Roth, Assor, Kanat-Maymon, & Kaplan, 2007; Roth & Weinstock, 2013) based measurement of autonomy supportive or controlling behaviours of the individual in a position of leadership upon perceptions of these styles by the individual with whom they were interacting. Those studies utilized a modified version of the teacher autonomy support scale developed by Assor, Kaplan, and Roth (2002). Three studies (Maulana, Opdenakker, Stroet, & Bosker, 2013; Sarrazin, Tessier, Pelletier, Trouilloud, & Chanal, 2006; Van den Berghe et al., 2013) utilized observation and included objective ratings of need supportive and controlling styles via videotape coding. In the studies which employed an experimental design (n = 4), need supportive and controlling styles were manipulated via different tasks. For example, in one of the studies (Deci et al., 1982) undergraduate students were randomly assigned a role of an individual in a position of authority or leadership (e.g., teacher) or a sub-ordinate (e.g., student). Teachers who were told they were responsible for their students performing up to the standard exhibited more controlling behaviours than teachers who were told there were no performance standards for their students' learning. One of the studies (Grolnick, Weiss,

McKenzie, & Wrightman, 1996) used interview ratings with parents to measure autonomy support, involvement, and structure dimensions.

Drawing from the literature reviewed, we next present a detailed report and explanation of the findings relevant for understanding of antecedents of coaches motivating styles. Additionally, we highlight the applications in the coaching domain and identify additional potential antecedents of coaches' interpersonal style. Specifically, the next sections are organized into three broad categories of antecedents, namely, contextual factors, perceptions of others' behaviours and motivation, and personal factors. We also present two subcategories (i.e., social-environmental factors and external pressure) covered in the educational, parental, workplace, and sport domains of SDT.

Contextual Factors

Contextual antecedents of need supportive and controlling motivational styles have received the most attention in the SDT literature (e.g., Deci et al., 1982; Flink, Boggiano, & Barrett, 1990; Pelletier et al., 2002; Pelletier & Sharp, 2009; Reeve, 2009; Taylor, Ntoumanis, & Standage, 2008). Our review suggested social-environmental factors and external pressures to be the predominant contextual factors in the literature.

Social-environmental Factors

The themes within this category were identified in studies from the contexts of sport and parenthood and represent a variety of social-environmental factors that may have an influence on one's interpersonal style. For parents, stress (e.g., negative and positive life events), and social support factors were identified as a social-environmental contextual factors in the home context. Cultural norms were identified in the educational context; and job security, opportunities for professional development, and work-life conflict emerged from the sport context.

More specifically, in the parental literature, Grolnick et al. (1996) examined stress factors (e.g., negative and positive life events), and social support as predictors of parenting style. Mothers who were exposed to more negative life events (e.g., death in the family, illness, repossession of their home) were less likely to provide structure and autonomy support for their adolescents relative to those mothers experiencing positive events. Furthermore, Grolnick et al. (1996) found no relation between stress factors and fathers' parenting style; however, fathers who reported higher social support were more involved (i.e., participated in spontaneous and planned activities, spent time spent alone with their child, and others) with their adolescents.

In an observational study of an educational literature, teachers in individualistic (i.e., Dutch classroom) and collectivistic cultures (i.e., Indonesian classroom) by Maulana et al. (2013), teachers' involvement with students in lessons was found to differ across cultures in a manner that aligned with the typical findings from SDT-based cross-cultural research. The findings suggest that teachers in individualistic societies see students as independent and autonomous and this was associated with the teachers allowing them to express their opinions, which is characteristic of an autonomy supportive teaching style. However, the findings suggest that teachers in collectivistic societies see students as class members rather than individuals resulting in less involvement (e.g., closeness) with the students. This could be interpreted as suggesting teachers are less need supportive in collectivistic societies than in individualistic societies (Maulana et al., 2013). This notion is supported by Reeve et al. (2014) who found that teachers in collectivistic cultures are more controlling in their classroom because they believe controlling behaviour is a cultural norm.

In the sport literature, Stebbings et al. (2012) examined coaches from various types and levels of sports and with job statuses ranging from full-time paid to part-time volunteer.

Coaches in that study who experienced opportunities for professional development reported using autonomy supportive behaviours and also had high need satisfaction and psychological well-being. In contrast, coaches who experienced fewer opportunities for professional development were more likely to experience need thwarting and psychological ill-being, as well as the use of more controlling behaviours (Stebbings et al., 2012). This implies that opportunities to develop professionally may foster the coaches' sense of competence and autonomy, by increasing their knowledge and experience, and creating a sense that they are in control of their own development. Relatedness may also be fostered when engaging with their coaching peers during professional development activities However, coaches who are not given these opportunities might feel isolated and prohibited from engaging with their coaching peers as well as from developing their coaching skills. This may ultimately be costly to coaches' sense of relatedness and competence. Next, coaches who experienced greater job security reported higher need satisfaction and psychological well-being, as well as use of autonomy supportive behaviours when interacting with their athletes. Job security was not related to need thwarting and perceived controlling coach behaviours (Stebbings et al., 2012). Finally, coaches who experienced lower work-life conflict reported higher need satisfaction, psychological well-being, and the use of autonomy supportive strategies. Coaches who experienced higher work-life conflict reported higher need thwarting, psychological ill-being and the use of controlling strategies (Stebbings et al., 2012). Experience of conflict between coaching and life demands may be related to coaches' experiencing an inability to function effectively in their coaching role, which may impact negatively upon the coaches' relationships with athletes, employers, and organizations as well as coaches' use of more controlling strategies.

In summary, it is important to consider the nature of the social context and the cultural

norms that coaches operate in when trying to understand the reason that they may engage in need supportive and controlling behaviours. Stressful and negative life events, poor opportunities for professional development, and job insecurity are likely to predict lower need satisfaction and less autonomous motivation among individuals in positions of authority or leadership (Grolnick et al., 1996; Stebbings et al., 2012). This review suggests these factors may be precursors to these individuals such as coaches utilizing less need supportive and more controlling strategies when interacting with their athletes. This is in contrast to individuals experiencing positive life experiences (e.g., work-life balance), more opportunities for professional development and job security. In these circumstances, individuals in positions of authority or leadership are likely to be more need supportive and less controlling. Additionally, those individuals may be more controlling in collectivistic societies where they believe controlling behaviour is a norm comparing to individuals in individualistic societies (Maulana et al., 2013). Collectively, reviewed research suggests that organizations such as sport clubs should focus on creating a more positive environment for coaches, in part by providing them with job security, opportunities for professional development, and a healthy work-life balance.

External Pressures

Antecedents of interpersonal styles categorized as external pressures were obligations to comply with a curriculum (e.g., school, practice), colleagues' expectations and demands, pressure from others to meet time constraints, pressure to maximize others' performance via control-inducing statements, administrative pressures, pressure from authorities (e.g., supervisors), performance evaluations, and administration of rewards. This category was identified from the SDT literature in the areas of education (six empirical studies), parenthood (one empirical study), workplace (one empirical study), and more recently in the sport domain

(two empirical studies). Illustrative examples are now provided in each case.

In the education literature (Pelletier & Sharp, 2009; Reeve, 2002; Reeve, 2009), teachers were found to experience external pressure when feeling obligation to comply with the already established school curriculum, when experiencing expectations or demands from their colleagues and school administrators, as well as when operating under strict time constraints set by school authorities. Experiencing these pressures was directly associated with teachers' perceptions of themselves using more controlling strategies when interacting with their students (e.g., Soenens, Sierens, Vansteenkiste, Dochy, & Goossens, 2012).

In the early studies in the educational context, external pressure was manipulated via experimental study designs in which it was shown that teachers who were pressured by the experimenter to maximise their students' performance via control-inducing statements exhibited more controlling behaviours towards these students (e.g., criticised; Deci et al., 1982; Flink et al., 1990). These findings were corroborated in more recent studies via teachers' self-reports of using less autonomy supportive and more controlling strategies in the classroom when experiencing external pressure, such as perceptions of pressure associated with colleagues, perceptions of pressure from the school administrators, and perceptions of pressure associated with the school curriculum (Leroy, Bressoux, Sarrazin, & Trouilloud, 2007; Pelletier et al., 2002; Soenens et al., 2012; Taylor et al., 2008). These studies showed that direct relations between external pressure and controlling behaviours were mediated by teachers' self-determined motivation. For example, external pressure such as time constraints, pressure from school authorities, or performance evaluations predicted lower autonomous motivation to teach (Leroy et al., 2007; Pelletier et al., 2002; Soenens et al., 2012; Taylor et al., 2008), which in turn predicted the teachers reporting using less autonomy supportive and more controlling behaviours toward their students (Deci et al., 1982; Taylor et al., 2008).

Similar findings have been reported in the parental literature (Grolnick, Gurland, DeCourcey, & Jacob, 2002). In this experimental study, external pressure toward mothers was created via control-inducing statements. Behaviours were observed (i.e., videotaped) and analyzed using verbal rating for controlling (e.g., mothers using leading questions and providing answers to their child) and autonomy supportive (e.g., mothers providing feedback and support to their child) interactions. The results showed that mothers who were exposed to external pressure were more controlling and scored lower on using autonomy supportive strategies such as offering information and giving feedback, than mothers who experienced less external pressure (Grolnick et al., 2002).

Only one study with implications for the work place was relevant to the theme of external pressure. Harackiewicz and Larson (1986) revealed that experimental participants assigned as supervisors were more controlling in their supervision when their job included administering awards to maintain task enjoyment compared to supervisors whose job did not include rewarding others; the latter were less controlling (Harackiewicz & Larson, 1986). These findings suggest that in situations where supervisors administered rewards, they were less interested in the task enjoyment of those whom they supervised. However, in the events when their job did not include rewarding, supervisors might have felt more interested in their supervisees' task enjoyment, resulting in being less controlling.

In the sport literature, Rocchi et al. (2013) identified that basketball coaches were more likely to perceive themselves as low in autonomy support if they also had high perceptions of pressure from colleagues (i.e., pressure from other coaches in terms of direct comparison), pressure associated with the practice curriculum (i.e., perceived stress and impositions placed on them regarding how to run training sessions and what decisions to make about training) and administrative pressure (i.e., pressure from club administration on

how to run the team, select the team and fulfil requirements). Similarly, Iachini's (2013) study of high school coaches found that the more coaches perceived pressure from being evaluated for their athletes' performance, the less autonomy supportive they were toward their athletes. Collectively, the studies presented in this category, imply that when experiencing external pressure, an individual in a position of authority or leadership (e.g., a coach) will tend to adopt more controlling and less autonomy supportive strategies to motivating others (Reeve, 2009).

In summary, evidence suggests that external pressure (e.g., performance targets from club administrators) can undermine coaches' self-determined motivation and result in coaches' using more controlling behaviours (e.g., using praise in a controlling way, punishment). Coaches will always have to deal with time constraints or performance evaluations (Pelletier & Sharp, 2009). However, this review highlights the importance of supporting coaches so that such circumstances do not internalize pressures and become controlling.

Perceptions of Others' Behaviours and Motivation

Ten empirical studies found antecedents of leaders' interpersonal style to be their perception of other's behaviours (e.g., engagement) and motivation. In the education literature, when perceiving students as highly self-determined to engage in classroom lessons, teachers reported that they tended to respond by using more structure, involvement and autonomy supportive strategies (Pelletier et al., 2002; Pelletier & Vallerand, 1996; Reeve, 2002; Reeve, 2009; Taylor & Ntoumanis, 2007; Taylor et al., 2008). Additionally, students who were perceived as showing higher emotional and behavioural engagement in the classroom received more autonomy support, structure, and involvement behaviours from their teachers (Skinner & Belmont, 1993). Two studies found that when perceiving students as not

self-determined, teachers tend to use controlling motivational strategies in their classrooms (Sarrazin et al., 2006; Soenens et al., 2012). For example, in an experimental study with graduate and undergraduate students being assigned as supervisors and supervisees, respectively, it was found that supervisors who believed that their supervisees were intrinsically motivated toward the experimental task were perceived as more autonomy supportive and less controlling than supervisors who considered their supervisees to be extrinsically motivated (Pelletier & Vallerand, 1996). Interestingly, Sarrazin et al. (2006) found similar results in a mixed method study that included self-reports from physical education teachers and high school students and objective coding of teacher behaviours from videotaped lessons. Teachers who had expectations of low self-determined motivation among their students were objectively rated as using more controlling strategies than teachers who had expectations of highly self-determined students.

In the parental literature, Grolnick et al. (1996) found that parents who perceived their adolescent as "difficult" (e.g., tempered, moody, not engaged) reported providing less autonomy support and less involvement than parents who perceived their adolescents as less difficult (e.g., more engaged, less moody). Similarly, in the sport literature, high school coaches who perceived their athletes to be low in self-determined motivation, self-reported using less autonomy supportive behaviour techniques toward these athletes than coaches who perceived their athletes to be more self-determined (Rocchi et al., 2013). In an experimental health context study of exercise science students being assigned the role of a fitness instructor, Ng, Thøgersen-Ntoumani, and Ntoumanis (2012) found that perceptions of exerciser self-determined motivation was associated with high instructor autonomy support, but only for male exercisers.

In sum, this review has revealed that coaches' perceptions of their athletes' self-

determined motivation may be an important trigger of their adoption of a need supportive or controlling interpersonal style. The research suggests that coaches use more controlling strategies when perceiving that their athletes lack self-determined motivation. This may be because they feel pressure to "make" these athletes motivated because otherwise they may not meet the performance expectations of club administrators or others with expectations such as parents or sponsors. Hence, those coaches might use controlling strategies as means of ensuring that athletes reach the required standards (Pelletier & Sharp, 2009). On the other hand, the literature shows that perceiving athletes as self-determined may predict coaches' use of more need supportive strategies (Rocchi et al., 2013). When coaches can see that athletes are already self-determined, they may feel they have more freedom to be need supportive as the athletes' self-determined motivation is already in place. Ultimately, these findings highlight a common misunderstanding of the nature of self-determined motivation among the coaching community. It is important that coaches are educated to understand that need supportive coaching is in fact the more adaptive way to foster motivation, even among athletes low in self-determined motivation. When coaches are controlling they may witness an increase in athletes' levels of motivation, but this will not be self-determined motivation, it will most likely be introjected and/or external motivation. This is unlikely to sustain long term or be adaptive for the athletes' performance or well-being.

Personal Factors

Seventeen empirical studies identified that personal factors (i.e., beliefs or personal dispositions) played a role in determining interpersonal styles adopted by teachers, parents, or coaches. Personal factors identified in these studies were individuals' beliefs about effectiveness, implementation, and normalcy of implementation styles, religious affiliation and frequency of church attendance, individuals' epistemological and entity or incremental

nature of the beliefs, causality orientations, self-regulation, and the individuals' self-determined motivation, internal pressures (e.g., ego-involvement), psychological need satisfaction, and well-/ill-being.

Reeve et al. (2014) focused on three different beliefs teachers may have when orienting toward autonomy supportive and controlling interpersonal styles in relation to societal/cultural type. The study showed teachers will subscribe to a particular style depending on how effective, normative, and easy-to-implement they perceive this style to be. The effectiveness belief was higher among autonomy supportive teachers in individualistic societies. Teachers in collectivistic societies believed that a controlling style was more normative, and they reported that they used it more commonly in their classrooms. The ease of implementation belief predicted autonomy support in teachers in individualistic cultures, but not in collectivistic cultures.

Another type of belief, religious affiliation, was explored within the education literature as an antecedent of interpersonal styles (Cai, Reeve, & Robinson, 2002). This study of home educators and public school teachers found that religiously motivated and more frequent church attendees (i.e., home educators) reported a preference towards motivating their children's learning in a more controlling manner than public school teachers. This suggests that religious beliefs may orient teachers toward a particular interpersonal style, although the evidence was correlational in nature.

One study has assessed personal epistemological beliefs (i.e., beliefs about perception of knowledge characteristics and nature of knowing) as antecedents of interpersonal styles (Roth & Weinstock, 2013). In a study with high school teachers, it was found that students of teachers who were more absolute and objective (i.e., the teachers believed knowledge is simple and allowed for single correct answers and self-evident truth) reported their teachers as

less autonomy supportive. On the contrary, teachers who were more relativist and subjective (i.e., believed knowledge is complex and changing and permits justifiable perspectives) were comparatively more autonomy supportive (Roth &Weinstock, 2013). This suggests that teachers with a relativist belief are more flexible in their approach and as such may be more willing and/or able to display other characteristics of autonomy support that also reflect flexibility. This could include demonstrating understanding of students' perspectives and providing students with opportunities for choice and decision making. In contrast, teachers with absolutist beliefs do not allow for flexibility in answers, and this is suggestive of more controlling behaviours.

Leroy et al. (2007) reported that the belief that academic abilities cannot change despite students' efforts (i.e., entity belief) was negatively related to teachers' perception of autonomy supportive strategies. The belief that academic abilities can be improved through students' own efforts (i.e., an incremental belief) did not have a direct relation with autonomy support.

This review identified three studies and two review chapters within educational context that had explored how causality orientations predict teacher's interpersonal style. SDT distinguishes between three types of causality orientations: autonomous, controlled, and impersonal (Deci & Ryan, 1985b). Individuals with an autonomous causality orientation pursue volitional choices and experience higher self-determination and need satisfaction (Deci & Ryan, 1985b; Taylor et al., 2008). Conversely, individuals with controlled causality orientation experience pressured behaviours, lower self-determination, and need thwarting (Deci & Ryan, 1985b; Van den Berghe et al., 2013). Individuals with an impersonal causality orientation tend to experience inefficient behaviour (Deci & Ryan, 1985b). Overall, the reviewed studies found that causality orientations were significantly associated with

interpersonal styles. Teachers with a controlled causality orientation embraced more controlling behaviours, whereas teacher with an autonomous causality orientation utilized more autonomy supportive behaviours (Reeve, 1998; Reeve, 2002; Reeve, 2009; Taylor et al., 2008; Van den Berghe et al., 2013). This may be because autonomous orientation allows teachers to function in self-determined ways. That is, autonomously orientated teachers feel more autonomous in their decisions, more competent when teaching and more related to their students, resulting in more autonomy supportive behaviours (Taylor et al., 2008). In contrast, control oriented teachers may experience higher internal pressure to perform well and need thwarting; these experiences result in teachers displaying more controlling behaviours (Van den Berghe et al., 2013).

Other dispositional factors have recently been explored, beyond causality orientations. In a study by Pierro, Presaghi, Higgins, and Kruglanski (2009) in the educational literature, two self-regulatory orientations (i.e., locomotion and assessment) were investigated as antecedents of the two interpersonal styles. Locomotion orientation refers to a trait of making something happen, whereas assessment orientation is a trait reflecting more critical evaluation. The results revealed that teachers who had more of an assessment orientation (such as comparing themselves with other people, thinking about their positive and negative characteristics, and critically evaluating their own and others' work), reported using less autonomy supportive behaviours and more controlling ones than teachers with a locomotion orientation (Pierro et al., 2009). High assessment teachers were found to be extrinsically motivated and used rewards and punishment to motivate their students, more than high locomotion teachers. The latter were more autonomously motivated and utilized more autonomy supportive strategies.

Furthermore, research studies identified in the review examined the degree of

autonomous motivation of teachers as predictors of their autonomy supportive and controlling behaviours. The results indicated that autonomously motivated teachers reported the use of a more autonomy supportive teaching style (Robertson & Jones, 2013; Van den Berghe et al., 2014) and less use of a controlling style (Soenens et al., 2012). The results suggest that more autonomous motivation for teaching energizes and drives teachers to relate to students in a more autonomy supportive way. Moreover, Roth et al. (2007) revealed that teachers' self-reported autonomous motivation for teaching was positively related to students' perceptions of teacher's autonomy support. These findings highlight the importance of teachers feeling autonomously motivated. When this is the case, they are more likely to adopt an autonomy supportive style that is detectable by students.

In the parental literature, internal pressures such as high contingent self-esteem and ego-involvement have been identified as predictors of autonomy supportive and controlling behaviours. In two experimental studies by Grolnick and coworkers (2002, 2007), external pressure was manipulated via control-induced statements. Parents who were ego-involved in relation to their children's performance utilized more controlling than autonomy supportive strategies towards their children. Furthermore, parents with a mindset resistant to changes and those experiencing high contingent self-esteem also exhibited more controlling behaviours (Grolnick et al., 2007). The results suggest that parents who are ego-involved may utilize controlling behaviours in an effort to ensure their child's success, which they perhaps perceive will also reflect well on them. Hence, experiences of ego-involvement could be an antecedent of the creation of an ego-involving motivational climate, which is recognized in the SDT literature as a characteristic of controlling behaviours (Bartholomew et al., 2009). Furthermore, in a recent study, Grolnick (2015) found that autonomous motivation towards involvement in child's schooling (e.g., knowing about school activities and events, going to

school activities and events, and playing games that may help their children learn making the environment more positive) was positively related to the degree of involvement as well as experiences of positive affect during involvement.

In the sport literature, Stebbings et al. (2011) reported a positive relation between coaches' need satisfaction and well-being and their use of autonomy supportive behaviours. These findings were extended in a longitudinal study by Stebbings et al. (2015) in which the coaches' psychological well-being (i.e., positive affect and integration of coaching with one's sense of self) was positively associated with autonomy supportive coaching. This suggests that when coaches are excited and engaged in their coaching role and have internalised motives, they are more likely to provide their athletes with opportunities to make choices or feel volitional, compared to coaches that are less excited and engaged. Conversely, the study revealed that coaches who experienced psychological ill-being (i.e., negative affect) reported being more controlling. Thus, when coaches are more distressed (e.g., experiencing negative affect) they may be more likely to provide negative feedback and intimidate their athlete, compared to coaches who are not distressed (Stebbings et al., 2015).

In summary, although there is some evidence from other contexts, very few studies in the context of sport have researched personal factors as antecedents of controlling and need supportive behaviours. Personal factors have predominantly been examined in the parental and education literature. Coaches' beliefs about need supportive and controlling behaviours (e.g., in terms of how effective, normative and easy-to implement they are) could predict the use of such behaviours (Reeve et al., 2014). As suggested by Reeve et al. (2014), these beliefs may be a potential mediator between external pressure and interpersonal style use. For example, pressures from club administration may shape the belief that a controlling style is the norm in the club, and this may encourage coaches to use controlling style strategies to

motivate their athletes. In terms of beliefs about effectiveness and ease of implementation, providing training programs on effectiveness and implementation of need supportive behaviours may help coaches use need supportive strategies when interacting with their athletes.

Another type of belief that could be relevant to coach interpersonal styles identified in this review is coaches' personal epistemological beliefs (Roth & Weinstock, 2013). Coaches who are more relativist about knowledge and believe that there are multiple perspectives on knowledge will more likely understand and enhance their athlete needs and self-determined motivation, ultimately adopting autonomy supportive strategies. On the contrary, coaches who are more absolutist believe knowledge is certain and objective, and will not allow flexibility for their athletes. These coaches may thwart their athlete needs and undermine their self-determined motivation, ultimately adopting controlling strategies.

Coaches who believe their athletes' abilities and skills cannot change regardless of their efforts (i.e., entity belief; Leroy et al., 2007) might focus on detecting athletes who are more "talented". In order to identify those athletes, they might conduct activities that focus more on athlete abilities, hence utilizing more ego-involving and controlling methods. However, coaches who believe athlete's abilities can be changed through their own effort (i.e., incremental belief; Leroy et al., 2007) may be less likely to utilize ego-involving methods. Exploring these beliefs among coaches may shed light on specific directions for designing coaching programs to facilitate need supportive behaviours.

Coaches may also experience ego-involvement, resistance to change and contingent self-esteem (Grolnick & Apostoleris, 2002) as a result of feeling a threat to their sense of self when they want their athletes to perform to the standard at which they are being evaluated. In order to create a more adaptive environment that could serve to reduce the risks of coaches

experiencing these internal and external pressures, sport administrators should regularly review their policies and practices to ensure that targets are agreed in a manner that is challenging to coaches rather than imposed in a way that is threatening. Moreover, it is clearly also important that sports administrators adopt a more need supportive and less controlling interpersonal style to ensure that the motivational climate surrounding coaches is adaptive. Furthermore, if clubs pressure coaches by placing emphasis on short-term outcomes, this is unlikely to be adaptive in the long term. Research suggests that this will have an undermining effect on the well-being of coaches and may create feelings of job insecurity (one of the predictors of controlling behaviours; Stebbings et al., 2012). According to SDT, if coaches also operate in a more need supportive environment, their well-being is likely to profit. Thus, when coaches experience high psychological well-being, they are more likely to use need supportive strategies and create more positive environment (Stebbings et al., 2011).

Summary and Implications for Future Research

The factors that lead those in positions of power and/or influence to be need supportive and/or controlling when interacting with subordinates is a topic that has been explored in various life domains (parental, education), but less so in sport. This review has identified a number of potential areas for future research that may reveal additional potential antecedents of coaches' interpersonal style. To date, only one study grounded in SDT has explored personality traits (i.e., narcissism) as predictors of autonomy supportive and controlling coach behaviours (Chapter 3). The narcissistic leadership literature has focused mainly on the negative characteristics of narcissistic leaders, describing them as authoritarian, superior, not tolerating criticism, or reacting to perceived ego threat with aggression (Rosenthal & Pittinsky, 2006). In the context of sport, it has recently been found that coaches with narcissistic traits will embrace more a controlling than need supportive interpersonal

style (Chapter 3). Additional work on this topic is required by looking at other personality characteristics. For example, the same trend could follow in exploring the other two factors of the "dark triad" (i.e., psychopathy, Machiavellianism), not just narcissism. The "dark triad" factors are found to share characteristics and all three entail characteristics such as self-promotion, lack of empathy, and aggressiveness. This suggests that such traits will potentially be positive predictors of controlling behaviours (Paulhus & Williams, 2002). Furthermore, it would be interesting to investigate the possibility of constructs from the Five-Factor model of personality (i.e., extraversion, agreeableness, conscientiousness, neuroticism, openness to experience) as predictors of need supportive and controlling behaviours. For example, extraversion, agreeableness and openness to experience are found to be positively related to supportive types of leadership, suggesting that they will also be associated with need supportive behaviours (Judge & Bono, 2000).

The literature reviewed in this chapter has also highlighted potential future directions on this topic from a methodological perspective. To date, no sport-specific studies have tested antecedents of coaching behaviours using an experimental design. Future studies could also replicate or expand upon experimental studies from other domains to determine whether similar antecedent variables are identified with regard to coaching. For example, replicating observational studies conducted in the educational literature could potentially determine the causes of need supportive and controlling interpersonal styles and answer why coaches engage in those specific behaviours (Sarrazin et al., 2006).

In summary, a number of antecedents of controlling and need supportive behaviours have been identified in the SDT literature across various life domains (e.g., education, work, parenting, sport, health). This review has identified that these antecedents fall into three main categories, namely contextual factors, perceptions of subordinate's behaviours and

motivation, and personal factors. The applicability of some of these antecedents to coaches' interpersonal styles is discussed in this chapter, but such arguments need empirical testing to be better substantiated. Although there are still gaps in knowledge, the literature suggests that individuals in positions of authority or leadership, when feeling external and/or internal pressures will embrace a more controlling and less need supportive interpersonal style. Further exploration of antecedents of the two behaviours is important to serve as a guideline in creating interventions for teachers, coaches, or parents to educate them in forming more positive environments. Ultimately, this will be more motivationally adaptive and foster higher well-being and performance, both for their athletes and for the coaches themselves.

Based on the findings of this review it is clear that the personal orientation category, specifically personality traits, has been under explored in relation to coach interpersonal styles (Mageau & Vallerand, 2003). Since personality is a determinant of one's behaviour (Mount, Illies, & Johnson, 2006) and has been linked to controlling and need supportive interpersonal styles in non-sport contexts (e.g., causality orientation; Deci & Ryan, 1985), it is important to consider the role of personality traits as antecedents of controlling and need supportive behaviours in the sport context. One personality trait that has been extensively researched in the leadership literature is narcissism (Rosenthal & Pittinsky, 2006). Compared to other dark personality traits such as Machiavellianism, or psychopathy, narcissistic individuals seek out competitive situations where they can stand out as leaders and receive attention and admiration from others (Mathieu & St-Jean, 2013). Thus, given the inherent competitive nature of sport, narcissism may be a particularly relevant dark personality trait for investigation in sport leadership research (Roberts, Woodman, & Sedikides, 2017), and as such, the next chapter will examine the role of narcissistic personality trait and its underlying

mechanisms (i.e., empathic concern and dominance) in relation to controlling and autonomy-supportive behaviours (measured by vignettes).

Table 2.1: Description of Reviewed Studies

Study	**Type of publication**	**Type of study (design)**	**Role of participants**	**Domain**	**Antecedents tested**	**Type of antecedent**	**Measure of the behaviour/outcome predicted**	**Motivational style measured**
Cai et al. (2002)	Journal article	Cross-sectional	Home educators, public school teachers, and university education students	Educational	Religious affiliation and frequency of church attendance	Personal factors	Self-report; Problems in School Questionnaire (PSQ; Deci et al., 1981)	Controlling and autonomy-supportive

Table 2.1 (Continued)

Study	**Type of publication**	**Type of study (design)**	**Role of participants**	**Domain**	**Antecedents tested**	**Type of antecedent**	**Measure of the behaviour/outcome predicted**	**Motivational style measured**
Deci et al. (1982)	Journal article	Experimental	Undergraduate students that served as teachers	Educational	Pressure to maximize students' performance via control-inducing statements	Contextual	Experimental manipulation via informational (no-performance-standards) vs controlling (performance-standards) inductions measured by tape recorder analysis using objective ratings (e.g., number of hints given), subjective rating (e.g., extend of teacher interest in puzzle activity), and teacher's questionnaire (e.g., how much do you enjoy being a teacher)	Controlling

Table 2.1 (Continued)

Study	Type of publication	Type of study (design)	Role of participants	Domain	Antecedents tested	Type of antecedent	Measure of the behaviour/outcome predicted	Motivational style measured
Flink et al. (1990)	Journal article	Experimental	Fourth grade teachers	Educational	Pressure to maximize students' performance via control-inducing statements	Contextual	Mixed design: Self-report; PSQ (Deci et al., 1981) and experimental manipulation via pressure statement measured by videotape analysis using objective (e.g., number of hints given) and subjective (e.g., extend of teacher interest in the activity) rating	Controlling
Grolnick (2015)	Journal article	Cross-sectional	Parents (i.e., mothers)	Home	Autonomous/ controlled motivation	Personal factors	Self-report; Parent-School Interaction Questionnaire (PSIQ; Grolnick et al., 1997), frequencies of engagement in child's activity, Parenting Context Questionnaire (PCQ; Grolnick &Wellborn, 1988)	School, cognitive, and personal involvement

Table 2.1 (Continued)

Study	Type of publication	Type of study (design)	Role of participants	Domain	Antecedents tested	Type of antecedent	Measure of the behaviour/outcome predicted	Motivational style measured
Grolnick & Apostoleris (2002)	Book chapter	Review	Parents (i.e., mothers and fathers)	Home	Stress and social support, perceptions of the adolescents' "difficulty", internal pressures (e.g., ego-involvement)	Contextual, perceptions of others' behaviours and motivation, and personal factors	Measured using variety of methods (e.g., questionnaire, observation)	Controlling, autonomy-supportive
Grolnick et al. (2002)	Journal article	Experimental	Parents (i.e., mothers)	Home	Pressure to maximize children' performance via control-inducing statements; internal pressure (e.g., ego-involvement)	Contextual, personal factors	Experimental manipulation via pressure statement measured by videotape analysis using verbal and nonverbal rating	Controlling

Table 2.1 (Continued)

Study	Type of publication	Type of study (design)	Role of participants	Domain	Antecedents tested	Type of antecedent	Measure of the behaviour/outcome predicted	Motivational style measured
Grolnick et al. (1996)	Journal article	Cross-sectional	Parents (i.e., mothers and fathers)	Home	Stress (e.g., positive and negative life events), social support, and perceptions about adolescences' "difficulty"	Contextual, perceptions of others' behaviours and motivation	Interviews	Involvement, autonomy support, structure
Grolnick et al. (2007)	Journal article	Experimental	Mothers and their fourth grade children	Home	Internal pressure (i.e., high contingent self-worth, mind resistant to change) combined with external pressure (i.e., evaluation)	Contextual, personal factors	Experimental manipulation via pressure statement measured by videotape analysis using verbal rating for controlling (e.g., leading questions and giving answers) and autonomy supportive (e.g., giving feedback and encouragement)	Controlling, autonomy-supportive

Table 2.1 (Continued)

Study	Type of publication	Type of study (design)	Role of participants	Domain	Antecedents tested	Type of antecedent	Measure of the behaviour/outcome predicted	Motivational style measured
Harackiewicz & Larson (1986)	Journal article	Experimental	Undergraduate students that served as supervisors	Workplace	Administration of rewards	Contextual	Experimental manipulation via controlling messages given by supervisor on what students should do	Controlling
Iachini (2013)	Journal article	Cross-sectional	Coaches	Coaching	Performance evaluations	Contextual	Self-report; Problems in Sports Questionnaire (PSQ; Amorose, 2008) –modification of PCQ (Deci et al., 1981)	Autonomy-supportive
Leroy et al. (2007)	Journal article	Cross-sectional	Fifth grade teachers	Educational	Obligations to comply with curriculum, colleagues' expectations and demands, administrative pressures, time constraints; entity vs incremental beliefs	Contextual and personal factors	Self-report; Learning Climate Questionnaire (Williams & Deci, 1996)	Autonomy-supportive

Table 2.1 (Continued)

Study	Type of publication	Type of study (design)	Role of participants	Domain	Antecedents tested	Type of antecedent	Measure of the behaviour/outcome predicted	Motivational style measured
Maulana et al. (2013)	Journal article	Cross-sectional	Teachers	Educational	Cultural norms	Contextual	Observational study (videotape analyses) measured by observer ratings of several subdimensions of involvement in the classroom	Involvement
Ng et al. (2012)	Journal article	Cross-sectional	Exercise science students as fitness instructors	Health	Perceptions of exercisers' self-determined and nonself-determined motivation	Perceptions of others' behaviours and motivation	Self-report; Health Care Climate Questionnaire for autonomy-supportive (HCCQ; Williams et al., 1996); Controlling Coach Behaviours Scale for controlling (CCBS; Bartholomew et al., 2010)	Autonomy-supportive and controlling

Table 2.1 (Continued)

Study	Type of publication	Type of study (design)	Role of participants	Domain	Antecedents tested	Type of antecedent	Measure of the behaviour/outcome predicted	Motivational style measured
Pelletier et al. (2002)	Journal article	Cross-sectional	Teachers (Grades 1-12)	Educational	Obligations to comply with curriculum, colleagues' expectations and demands, administrative pressures, time constraints; perceptions of students' self-determined and nonself-determined motivation	Contextual, perceptions of others' behaviours and motivation	Self-report; PSQ (Deci et al., 1981)	Autonomy-supportive

Table 2.1 (Continued)

Study	Type of publication	Type of study (design)	Role of participants	Domain	Antecedents tested	Type of antecedent	Measure of the behaviour/outcome predicted	Motivational style measured
Pelletier & Sharp (2009)	Journal article	Review	Teachers	Educational	Obligations to comply with curriculum, colleagues' expectations and demands, administrative pressures, time constraints; perceptions of students' self-determined and nonself-determined motivation	Contextual, perceptions of others' behaviours and motivation	Measured using variety of methods (e.g., questionnaires, experimental manipulations)	Controlling, autonomy-supportive

Table 2.1 (Continued)

Study	Type of publication	Type of study (design)	Role of participants	Domain	Antecedents tested	Type of antecedent	Measure of the behaviour/outcome predicted	Motivational style measured
Pelletier & Vallerand (1996)	Journal article	Experimental	Graduate students	Educational	Perceptions of students' self-determined and nonself-determined motivation	Perceptions of others' behaviours and motivation	Self-report and student perception; questionnaire included autonomy-supportive and controlling items developed from the SDT-based definition of those two behaviours	Autonomy-supportive and controlling
Pierro et al. (2009)	Journal article	Cross-sectional	Teachers (high school)	Educational	Self-regulatory orientation	Personal factors	Self-report; PSQ (Deci et al., 1981)	Controlling and autonomy-supportive
Reeve (1998)	Journal article	Cross-sectional	Students (future teachers)	Educational	Autonomous and controlled causality orientations	Personal factors	Self-report; PSQ (Deci et al., 1981)	Autonomy-supportive and controlling

Table 2.1 (Continued)

Study	Type of publication	Type of study (design)	Role of participants	Domain	Antecedents tested	Type of antecedent	Measure of the behaviour/outcome predicted	Motivational style measured
Reeve (2002)	Book chapter	Review	Teachers	Educational	Obligations to comply with curriculum, colleagues' expectations and demands, administrative pressures, time constraints; perceptions of students' self-determined and nonself-determined motivation; controlled causality orientation	Contextual, perception of others' behaviours and motivation, and personal factors	Measured using variety of methods (e.g., self-reports)	Autonomy-supportive, controlling

Table 2.1 (Continued)

Study	Type of publication	Type of study (design)	Role of participants	Domain	Antecedents tested	Type of antecedent	Measure of the behaviour/outcome predicted	Motivational style measured
Reeve (2009)	Journal article	Review	Teachers	Educational	Obligations to comply with curriculum, colleagues' expectations and demands, administrative pressures, time constraints; perceptions of students' self-determined and nonself-determined motivation; controlled causality orientation	Contextual, perception of others' behaviours and motivation, and personal factors	Measured using variety of methods (e.g., questionnaires)	Autonomy-supportive, controlling
Reeve et al. (2014)	Journal article	Cross-sectional	Teachers	Educational	Cultural norms; normalcy, effectiveness, and implementation beliefs	Contextual, personal factors	Self-report; vignettes on autonomy-supportive and controlling style	Autonomy-supportive and controlling

Table 2.1 (Continued)

Study	Type of publication	Type of study (design)	Role of participants	Domain	Antecedents tested	Type of antecedent	Measure of the behaviour/outcome predicted	Motivational style measured
Robertson & Jones (2013)	Journal article	Cross-sectional	Teachers	Educational	Autonomous motivation	Personal factors	Self-report: PSQ (Deci et al., 1981)	Autonomy-supportive
Rocchi et al. (2013)	Journal article	Cross-sectional	Coaches	Coaching	Obligations to comply with curriculum, colleagues' expectations and demands, administrative pressures; perception of athletes' self-determined and nonself-determined motivation	Contextual, perceptions of others' behaviours and motivation	Self-report; interpersonal behaviors scale (Beaudry & Pelletier, 2008)	Autonomy-supportive
Roth et al. (2007)	Journal article	Cross-sectional	Teachers, students (grades 3-6)	Educational	Autonomous motivation	Personal factors	Students' perceptions of autonomy-supportive behaviour: scale developed by Assor et al. (2002) measuring autonomy-supportive teaching	Autonomy-supportive

Table 2.1 (Continued)

Study	Type of publication	Type of study (design)	Role of participants	Domain	Antecedents tested	Type of antecedent	Measure of the behaviour/outcome predicted	Motivational style measured
Roth & Weinstock (2013)	Journal article	Cross-sectional	High school students, teachers	Educational	Epistemological beliefs	Personal factors	Students' perceptions of autonomy-supportive behaviour: scale developed by Roth et al. (2011) measuring teachers' perspective taking and teachers' provision of rationale	Autonomy-supportive
Sarrazin et al. (2006)	Journal article	Experimental	PE teachers, high school students	Educational	Perceptions of students' self-determined and nonself-determined motivation	Perceptions of others' behaviours and motivation	Observational study (videotape analyses) measured by observer ratings of verbal interactions of controlling and autonomy-supportive styles	Controlling, autonomy-supportive

Table 2.1 (Continued)

Study	Type of publication	Type of study (design)	Role of participants	Domain	Antecedents tested	Type of antecedent	Measure of the behaviour/outcome predicted	Motivational style measured
Skinner & Belmont (1993)	Journal article	Cross-sectional	Teachers (grades 3-5)	Educational	Perceptions of students' behavioural engagement	Perceptions of others' behaviours and motivation	Self-report; involvement included items that tapped teachers' affection, attunement, dedication of resources, dependability; structure included items of clarity of expectations, contingency, instrumental help and support, and adjustment of teaching strategies; autonomy- supportive items tapped teacher's coercive behaviour, respect, choice and relevance	Involvement, structure and autonomy support

Table 2.1 (Continued)

Study	Type of publication	Type of study (design)	Role of participants	Domain	Antecedents tested	Type of antecedent	Measure of the behaviour/outcome predicted	Motivational style measured
Soenens et al. (2012)	Journal article	Cross-sectional	Teachers	Educational	Obligations to comply with curriculum, colleagues' expectations and demands, administrative pressures, time constraints; autonomous motivation	Contextual, personal factors	Self-report; Psychological Control Scale-teacher self-report (Soenens et al., 2012)	Controlling
Stebbings et al. (2011)	Journal article	Cross-sectional	Coaches	Coaching	Need satisfaction and well-being	Personal factors	Self-report; modified version of HCCQ for autonomy-supportive (Williams et al., 1996); CCBS for controlling (Bartholomew et al., 2010)	Autonomy-supportive and controlling

Table 2.1 (Continued)

Study	Type of publication	Type of study (design)	Role of participants	Domain	Antecedents tested	Type of antecedent	Measure of the behaviour/outcome predicted	Motivational style measured
Stebbings et al. (2012)	Journal article	Cross-sectional	Coaches	Coaching	Opportunities for professional development, job security, work-life conflict	Contextual	Self-report; modified version of HCCQ for autonomy-supportive (Williams et al., 1996); CCBS for controlling (Bartholomew et al., 2010)	Autonomy-supportive and controlling
Stebbings et al. (2015)	Journal article	Longitudinal	Coaches	Coaching	Well-being (e.g., positive affect, integration), ill-being (e.g., negative affect, devaluation)	Personal factors	Self-report; modified version of HCCQ for autonomy-supportive (Williams et al., 1996); CCBS for controlling (Bartholomew et al., 2010)	Autonomy-supportive and controlling
Taylor & Ntoumanis (2007)	Journal article	Cross-sectional	PE teachers	Educational	Perceptions of students' self-determined and nonself-determined motivation	Perceptions of others' behaviours and motivation	Self-report; Teacher as Social Context Questionnaire (TASCQ; Wellborn et al., 1988)	Autonomy-supportive, structure, involvement

Table 2.1 (Continued)

Study	Type of publication	Type of study (design)	Role of participants	Domain	Antecedents tested	Type of antecedent	Measure of the behaviour/outcome predicted	Motivational style measured
Taylor et al. (2008)	Journal article	Cross-sectional	PE teachers	Educational	Obligations to comply with curriculum, colleagues' expectations and demands, administrative pressures, time constraints; perceptions of students' self-determined and nonself-determined motivation; autonomous causality orientation	Contextual, perception of others' behaviours and motivation, and personal factors	Self-report; TASCQ (Wellborn et al., 1988)	Autonomy-supportive, structure, involvement

Table 2.1 (Continued)

Study	Type of publication	Type of study (design)	Role of participants	Domain	Antecedents tested	Type of antecedent	Measure of the behaviour/outcome predicted	Motivational style measured
Van den Berghe et al. (2013)	Journal article	Cross-sectional	PE teachers	Educational	Controlled causality orientation	Personal factors	Observational study (videotape analyses) measured by observer ratings of need-supportive teaching dimensions (autonomy support, structure, relatedness) and need-thwarting teaching dimensions (controlling, chaotic, cold)	Controlling, need supportive
Van den Berghe et al. (2014)	Journal article	Cross-sectional	PE teachers	Educational	Autonomous motivation	Personal factors	Self-report; TASCQ (Wellborn et al., 1988)	Autonomy support, structure, involvement

CHAPTER 3

NARCISSISM AND COACH INTERPERSONAL STYLE: A SELF-DETERMINATION THEORY PERSPECTIVE

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Abstract

Athletes' sport experiences are often influenced by the interpersonal styles of communication used by their coaches. Research on personality antecedents of such styles is scarce. We examined the link between a well-researched personality trait, namely narcissism, and two types of coaching interpersonal style, namely autonomy-supportive and controlling styles. We also tested the mediating roles of dominance and empathic concern in explaining the relations between narcissism and the two coaching interpersonal styles. United Kingdom-based coaches ($N = 211$) from various sports completed a multi-section questionnaire assessing the study variables. Regression analyses revealed a positive direct relation between narcissism and controlling coach behaviours. Further, empathy (but not dominance) mediated the positive and negative indirect effects of narcissism on controlling and autonomy-supported interpersonal styles, respectively. We discuss these findings in terms of their implications for coaching and the quality of athletes' sport experiences.

Keywords: controlling, autonomy-supportive, dominance, empathy, sport

Introduction

Coaches' behaviours can have a profound influence on their athletes' motivation, performance, and well-being (Ntoumanis & Mallett, 2014). Self-Determination Theory (SDT; Ryan & Deci, 2002) provides an appropriate framework for investigating this topic, as it describes different (i.e., autonomy-supportive and controlling) interpersonal styles (set of behaviours) relevant to coaching (Occhino et al., 2014). Much research has examined the consequences of these styles in sport (for a review, see Ntoumanis, 2012). As well as understanding the outcomes of different interpersonal styles, it is important to consider their potential antecedents. Research on the antecedents of these styles is limited and has neglected personality variables. In the current study, we investigate the role of one particular personality trait – narcissism – in predicting autonomy-supportive and controlling coach behaviours.

Examples of autonomy-supportive behaviours are offering meaningful choices, allowing volition or initiative, encouraging rationales for task engagement, and acknowledging negative feelings (Mageau & Vallerand, 2003). Considerable SDT-based research points to positive relations between autonomy-supportive behaviours and optimal (i.e., self-determined) motivation (Ntoumanis & Standage, 2009), as well as other adaptive outcomes (e.g., well-being; Bartholomew et al., 2011).

Conversely, controlling coach behaviours are evident when coaches are authoritarian and use pressuring techniques to impose specific ways of feeling, thinking, and behaving upon their athletes (Bartholomew et al., 2009). Controlling coaches use various manipulative strategies to influence their athletes, such as outcome-contingent rewards (e.g., medals or money), imposed opinions, high-handed statements, yelling, normative comparisons, and contingent affection (Bartholomew et al., 2009). SDT-based research has shown positive relations between controlling behaviours and sub-optimal (i.e., non-self-determined)

motivation (Pelletier et al., 2001), as well as other maladaptive outcomes (e.g., ill-being; Bartholomew et al., 2011a).

To date, researchers have primarily focused on the outcomes of autonomy-supportive and controlling behaviours, and much less on their antecedents. Mageau and Vallerand (2003) proposed a model of coach–athlete relationship, grounded in SDT, in which they specified three antecedent categories of coaching behaviours. Importantly, one of these categories is related to the coach's personal orientation. According to this model, personality traits or stable beliefs are parts of this personal orientation category and can influence the likelihood of a person adopting autonomy-supportive vs controlling behaviours.

Narcissism and Coach Interpersonal Style

Narcissism, a well-researched personality trait of leaders (Rosenhalt & Pittinsky, 2006; Schoel et al., 2015), is relevant to the coaching literature, given the leading role of coaches in sport. Narcissism is a self-centred, self-aggrandizing, dominant, and manipulative interpersonal orientation (Emmons, 1987; Sedikides et al., 2004). Individuals high on narcissism (hereafter referred to as "narcissists" for brevity) seek attention and admiration, feel entitled, and are amoral, focusing on personal benefit, even at the blatant expense of others (Campbell et al., 2005; Morf et al., 2011; Watts et al., 2013). In group setting, narcissists emerge as leaders (due to their conversational dominance) and, more generally, strive to assume leadership positions (Brunell et al., 2008; Campbell et al., 2011).

Overall, the literature depicts narcissists negatively with regard to their leadership qualities and effectiveness (Judge et al., 2006; Grijalva et al., 2015a; Schoel et al., 2015). This is not surprising, given narcissists' behaviours towards subordinates. Specifically, narcissists are constantly looking for validation (perhaps due to nagging feelings of insecurity; Gregg & Sedikides, 2010) and seek out situations through which they can assert their authority and

superiority over others (Morf & Rhodewalt, 2001). Further, they lack suitable cognitive and affective responding to others' experiences (i.e., empathy; Davis, 1983), thus making self-centred decisions that ignore suggestions from others (Rosenthal & Pittinsky, 2006). In summary, narcissistic leaders are driven by their own need for dominance and admiration without empathy for those whom they lead (Rosenthal & Pittinsky, 2006; Schoel et al., 2015).

The leadership qualities associated with narcissism suggest that this trait may be a potential explanatory antecedent of coach behaviours, particularly controlling behaviours, in sport. For example, narcissists often behave in an authoritarian manner, take advantage of others, are hypersensitive to criticism, and become hostile when their planned actions turn ineffective (Sedikides et al., 2002; Morf et al., 2011). They belittle others (Stucke, 2003) and aggress against critics of their sub-par performance (Bushman & Baumeister, 1998). Belittlement and aggression are characteristics of the intimidation strategies associated with controlling coach behaviours (Bartholomew et al., 2009), consistent with the possibility that narcissistic coaches are more likely to enact controlling behaviours. Importantly, narcissists are attracted to highly competitive situations, because these provide them with the opportunity for self-enhancement (Wallace & Baumeister, 2002). Similarly, controlling coaches value competition and focus mainly on winning as a measure of success (Bartholomew et al., 2009). Finally, narcissists regard themselves as responsible for team success, but blame team failure on others (Campbell et al., 2000). Comparably, controlling coaches employ strategies such as guilt-inducing tactics to express their disappointment to seemingly underperforming athletes (Bartholomew et al., 2009). As such, it is reasonable to presume that narcissistic leaders in the sport coaching population exhibit controlling behaviours.

By comparison, very little is known about the relation between narcissism and autonomy-supportive forms of behaviour. Recent research on narcissism and prosociality has

indicated that narcissism is negatively related to helping behaviours (Lannin et al., 2014). Helping is a benevolent act and could conceptually be aligned with some autonomy-supportive behaviours such as providing rationales, offering encouragement, and being responsive to questions (Reeve & Jang, 2006). A situation in which narcissists might refuse to act prosocially is when helping others does not offer them the opportunity for self-enhancement (Wallace & Baumeister, 2002). In such a situation, narcissistic coaches might opt against autonomy-supportive strategies toward their athletes. However, when helping creates self-enhancement opportunities, narcissists may engage in autonomy-supportive behaviours.

Mediators of the Relation Between Coach Narcissism and Coach Interpersonal Style

The construct of empathy may be relevant as an explanation for the putative links between narcissism and coach interpersonal style. Lack of empathic concern accounts for the positive relation between narcissism and antisocial behaviour (Miller & Eisenberg, 1988; Hepper et al., 2014a). More specifically, the affective component of empathy – termed empathic concern (i.e., the ability to share others' emotions, feel sympathy, and experience compassion; Davis, 1980) – is often strongly and negatively associated with narcissism. As intimidation and additional controlling strategies enacted by coaches are characterized by aggression (Bartholomew et al., 2009), it is possible that reduced empathic concern in narcissistic coaches drives, in part, their controlling behaviours. Furthermore, as a form of "other-oriented" empathy (Davis, 1983), empathic concern may encourage use of autonomy-supportive behaviours (Soenens et al., 2007). On the basis of this literature, we hypothesised that empathic concern would mediate the relations between coach narcissism and coaching interpersonal style (i.e., controlling vs autonomy-supportive behaviours).

Another putative mediator of the proposed link between coach narcissism and coach

interpersonal style is dominance. Dominance is the component of power (with the other components being status and authority; Keltner et al., 2003) that may have the potential to account best for relations between coach narcissism and controlling coaching behaviours. Dominance refers to the ability to direct subordinates by regulating their resources and establishing superiority over them (Sedikides et al., 2002; Keltner et al., 2003). Dominance is one of the most demonstrative features of narcissistic leaders, as it entails pressurizing, harassing, or intimidating displays. Controlling coaching behaviours aim to demonstrate superiority over others (Bartholomew et al., 2009), whereas autonomy-supportive behaviours aim to support others, not dominate them. Hence, high dominance, a self-centred orientation, may be associated with controlling behaviours, but not with autonomy-supportive behaviours. On the basis of this literature, we tested whether dominance mediates the hypothesised relations between coach narcissism and controlling coaching behaviours.

The Current Study

The primary purpose of this study was to examine the antecedent role of narcissism in predicting controlling vs autonomy-supportive coach behaviours, in situations in which narcissism could be activated. On the basis of the above literature review, we hypothesised that coach narcissism would have a direct positive predictive effect on controlling coach behaviour (Sedikides et al., 2002), and a direct negative predictive effect on autonomy-supportive behaviour (Lannin et al., 2014). In addition, we hypothesised that reduced empathic concern would mediate (1) a positive (indirect) effect of narcissism on controlling coach behaviour (Hepper et al., 2014a), and (2) a negative (indirect effect) of narcissism on autonomy-supportive coach behaviour (Eisenberg et al., 2010). Finally, we hypothesised that dominance would mediate a positive (indirect) effect of narcissism on controlling coach behaviour (Raskin et al., 1991).

Method

Participants

The sample included 211 professionally qualified coaches (178 male, 33 female; M_{age} = 38.30, *SD* = 14.16, range = 18-81 years old) from across the United Kingdom. They represented a variety (*n* = 28) of sports (e.g., football, rugby, cricket, swimming, athletics, tennis). We recruited coaches via the Sportscoach UK organisation, county partnerships, sports club websites, and social media (i.e., Twitter, LinkedIn). Participants had on average 13.51 (*SD* = 10.07) years of coaching experience and were mainly White British (89.10 %).

Measures

A**utonomy-supportive and controlling coach behaviours.** We measured autonomy-supportive and controlling coach behaviours as responses to 12 vignettes. The vignettes corresponded to the 12 most important characteristics of narcissism: hypersensitivity to criticism, authority, self-sufficiency, superiority, exhibitionism, exploitativeness, entitlement, feelings of inferiority, lack of empathy, amorality, arrogance, and grandiosity. The vignettes described common coaching situations that could evoke narcissistic characteristics in coaches. That is, the situations were intended to render salient a context in which coach narcissism would be active and relevant. For example, many of these situations represented a threat to the pertinent narcissistic characteristic, as the following vignette (referring to hypersensitivity to criticism) illustrates:

> Upon the end of an important league game, the coach gathered his team on the field to discuss the team's defeat. After the coach finished talking, a team captain stood up criticizing the coach for the way the team played. The coach was visibly insulted and became intensely hostile in response to the criticism.

We asked coaches to rate what response would be appropriate in each vignette. The responses included examples of autonomy-supportive behaviours (e.g., "Invite the player to a one-on-one meeting, to discuss how things might be resolved") and controlling behaviours (e.g., "Shout to the player, threatening his captain's position"). Responses options ranged from 1 (*strongly disagree*) to 6 (*strongly agree*). We piloted extensively the vignettes and responses with coaches (n = 5) and SDT experts (n = 4), who provided feedback on the accuracy, content, and clarity of the vignettes and responses. We then made appropriate revisions.

Narcissism. We assessed narcissism via the 40-item and forced-choice Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988). The NPI requires participants to choose between a narcissistic (e.g., "Modesty doesn't become me") and a non-narcissistic (e.g., "I am essentially a modest person") statement. Scores range from 0-40, with higher scores reflecting higher narcissism. The NPI has demonstrated construct validity and adequate internal consistency ($\alpha > .70$) in previous studies (Horton & Sedikides, 2009).

Dominance. We assessed dominance using the 11-item International Personality Item Pool Dominance Scale (Goldberg et al., 2006), which is based on the California Personality Inventory (Wink & Gough, 1990). Sample items are: "Put people under pressure" and "Impose my will on others." Scores ranged from 1 (*strongly disagree*) to 6 (*strongly agree*). This scale has demonstrated construct validity and adequate internal consistency ($\alpha > .70$) in previous studies (Goldberg et al., 2006).

Empathic Concern. We assessed empathic concern with the 7-item Empathic Concern Subscale of the Interpersonal Reactivity Scale (Davis, 1980). Sample items are: "When I see someone being treated unfairly, I sometimes don't feel very much pity for them" (reverse scored), and "Sometimes I don't feel sorry for other people when they are having

problems" (reverse scored). Scores ranged from 0 (*does not describe me well*) to 4 (*describes me very well*). This sub-scale has demonstrated good levels of validity and internal reliability (Davis, 1980).

Procedures

Following university ethics approval, we created an online questionnaire using the Bristol Online Survey (BOS) platform. Coaches who consented to participate completed a multi-section online (n = 210) or hardcopy (n = 6) questionnaire in 15-20 min. The participants of the online questionnaires had to respond to the each question in order to move to the next one (i.e., forced-choice), disabling the possibility of missing data cases. Together with six hardcopy questionnaires, the study did not contain missing data cases for the measured variables.

Data Analyses

First, we used SPSS 21.0 to screen for univariate and multivariate normality (i.e., skewness and kurtosis), and for multicollinearity. We also calculated correlations, means, standard deviations, and scale reliabilities using Raykov's (2009) unidimensional composite reliability measure.

Subsequently, we conducted multiple regression analyses. We entered gender as a covariate, given gender differences in narcissism (Grijalva et al., 2015b) and the shortage of female coaches that would allow for separate analyses based on gender. Multiple regressions analyses was used as opposed to structural equation modelling (SEM), because of the relatively small sample size, that is determined by the ratio between number of participants (N = 211) and number of variable items (N = 82; Nicolas et al., 2011). The ratio was approximately 1: 2.5, which did not meet the criteria for SEM (Nicolas et al., 2011). To determine the significance of total, direct, and indirect (via empathic concern and dominance)

effects of narcissism on controlling and autonomy-supportive behaviours, we implemented Preacher and Hayes' (2008) SPSS PROCESS macro. The regression model contained two mediators (empathic concern and dominance), and we tested the significance of specific indirect effects using bias-corrected bootstrapped 95% confidence intervals with 5000 resamples (Preacher & Hayes, 2008). We standardised all variables before conducting mediation analyses; hence all direct effects are standardised effects. As recommended, we report 95% bias corrected CIs rather than *p* values (Preacher & Hayes, 2008).

Results

Preliminary Analyses

First, we screened the data for multivariate outliers using Mahalanobis distance ($p < .01$; Tabachnick & Fidell, 2001). This statistic identified seven outliers, which we removed. Next, we screed the data for univariate outliers and, as a result, removed five further outliers (i.e., *z*-score > 3.29), resulting in a final sample of 211 coaches. We present, in Table 3.1, the correlations, composite reliability coefficients, means, and standard deviations for all study variables. All of them had high internal consistency and were normally distributed (skewness range: -.97 to 1.10, kurtosis range: -.42 to 1.67). Correlation coefficients ranged from small to moderate, and did not reveal any relations suggesting that multicollinearity (i.e., $r > .70$) could be an issue in subsequent regression analyses.

Table 3.1

Correlations, Internal Consistencies, Means, and Standard Deviations for Study Variables (N = 211)

	Variable	1	2	3	4	5
1	Narcissism	**.82**				
2	Dominance	.58**	**.83**			
3	Empathic concern	-.19**	-.20**	**.71**		
4	Controlling behaviours	.33**	.25**	-.23**	**.71**	
5	Autonomy-supportive behaviours	-.07	-.06	.29**	-.28**	**.70**
	Possible Range	0-40	1-6	0-4	1-6	1-6
	M	12.98	3.38	2.98	1.38	5.26
	SD	5.79	0.83	0.63	0.40	0.51

Note: Raykov composite reliability coefficients are in bold along the diagonal. Correlation values are below the diagonal. *$p < .05$, **$p < .01$ (2-tailed).

Main Analyses

To test the hypotheses, we conducted multiple regression analyses controlling for gender (Figure 3.1)[1]. In the first model, we included narcissism as an independent variable, controlling behaviours as the outcome variable, and empathic concern and dominance as mediator variables. Narcissism positively predicted controlling behaviours ($\beta = .26$, $p = .01$), and negatively predicted empathic concern ($\beta = -.17$, $p = .01$); empathic concern negatively predicted controlling behaviours ($\beta = -.18$, $p = .01$). In addition, we obtained a small indirect positive effect (Table 3.2) of narcissism on controlling behaviours via reduced empathic

[1] We repeated the main analyses reported in the manuscript, separating maladaptive (i.e., exhibitionism, exploitativeness, entitlement) and adaptive (i.e., authority, self-sufficiency) dimensions of narcissism (Barry & Malkin, 2010). Authority, exhibitionism, exploitativeness, and entitlement directly and positively predicted dominance. Entitlement directly and negatively predicted empathic concern. Dominance was not a direct significant predictor of autonomy-supportive and controlling behaviours. Empathic concern was a direct negative predictor of controlling behaviours, and a direct positive predictor of autonomy-supportive behaviours. When examining indirect effects, empathic concern was a significant mediator between entitlement and controlling and autonomy-supportive behaviours, respectively.

concern (b = .03; lower bound [LB] = .01; upper bound [UB] = .07). Ranges from LB to UB that do not include 0 are indicative of a true indirect effect (Preacher & Hayes, 2008). In contrast, although narcissism positively predicted dominance (β = .56, p < .01), there was no effect of dominance on controlling behaviours (β = .07, p = .38). Further, there was no indirect effect of narcissism on controlling behaviours via dominance (b = .04; LB = -.05; UB = .14).

In the second model, we included narcissism as an independent variable, autonomy-supportive behaviour as the outcome variable, and empathic concern as a mediator variable. Narcissism did not directly predict autonomy-supportive behaviours (β = .00, p = .99). However, narcissism negatively predicted empathic concern (β = -.17, p = .01), and empathic concern positively predicted autonomy-supportive behaviours (β = .27, p < .01). Further, there was a small indirect negative effect (Table 3.2) of narcissism on autonomy-supportive behaviours via empathic concern (b = -.05; LB = -.10; UB = -.01).

Table 3.2

Total and Indirect Effects of Narcissism on Controlling Behaviours via Dominance and Empathic Concern and Narcissism and Autonomy-Supportive Behaviours via Empathic concern when Controlling for Gender

Independent variable	Criterion variable	Total indirect effects (95% CI)	Specific indirect effects	
			Dominance (BC 95% CI)	Empathic Concern (BC 95% CI)
Narcissism	Controlling behaviours	.07 (-.02 – .17)	.04 (-.05 – .14)	.03 (.01 – .07)
	Autonomy-supportive behaviours	-.05 (-.10 – -.01)		-.05 (-.10 – -.01)

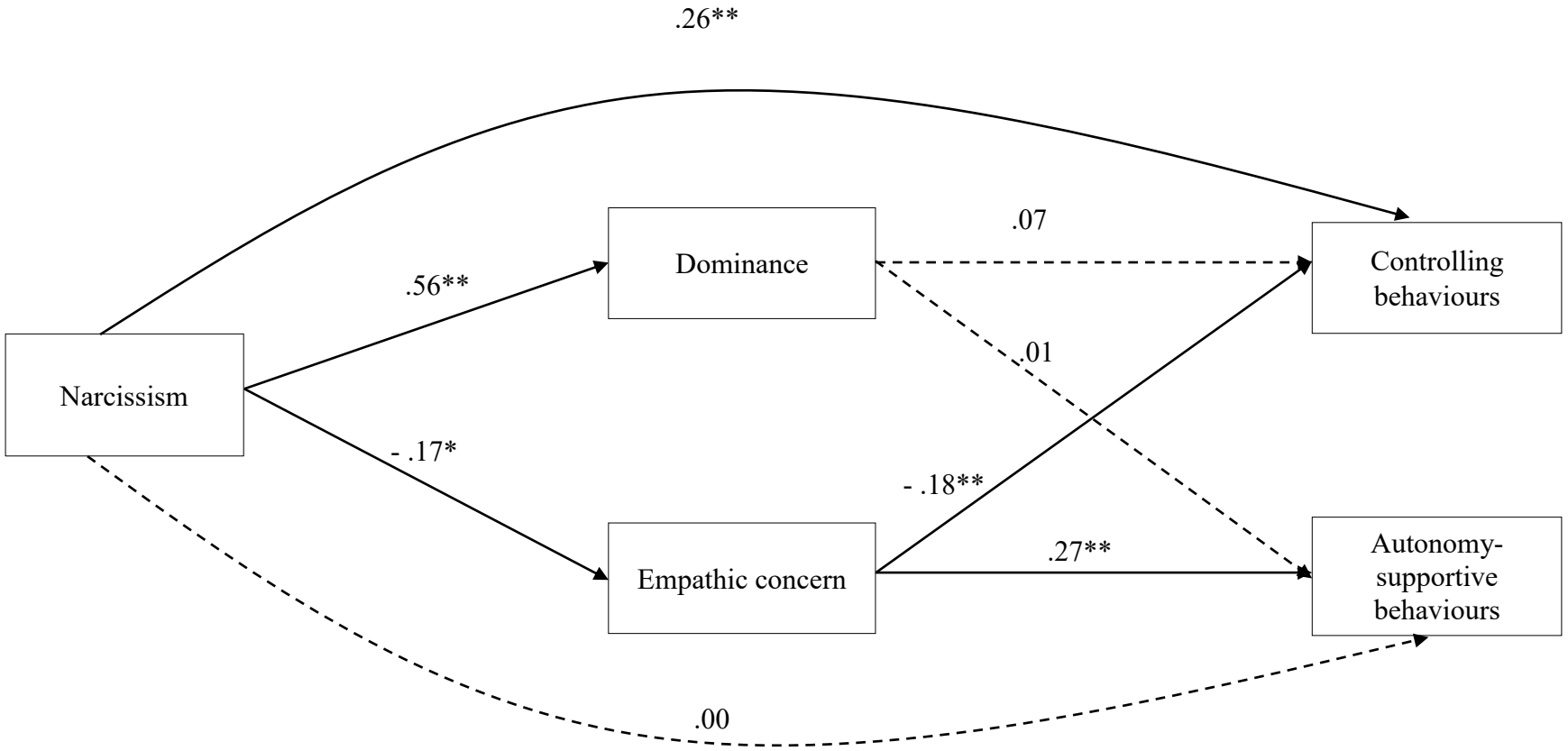

Figure 3.1. Testing the predicting effects of narcissism on controlling behaviours via empathic concern and dominance and narcissism and autonomy-supportive behaviours via empathic concern when controlling for gender (N = 211). *Note:* Standardised beta coefficients are reported. *$p < .05$, ** $p < .01$. Dashed lines represent non-significant relations.

Discussion

We set out to investigate whether narcissism predicts controlling and autonomy-supportive behaviours in situations in which narcissism could be activated, both directly and indirectly through empathic concern and dominance. We obtained partial support for the hypotheses in that narcissism positively predicted controlling behaviours, but the anticipated direct negative effect of narcissism on autonomy-supportive behaviours did not emerge. Further, empathic concern mediated the predictive effects of narcissism on both controlling and autonomy-supportive behaviours as expected, but the hypothesised mediated effect of narcissism on controlling behaviours via dominance did not emerge.

The positive relation between narcissism and controlling behaviours is a novel finding in the SDT literature. This finding is consistent with the personality and social psychology literature, which has shown that narcissists engage in more control-based behaviours (Nevicka et al., 2011), aggression (Bushman & Baumeister, 1998), and hostility (Raskin et al., 1991). There are several reasons why narcissistic coaches may utilise controlling behaviours, some of which we described in our Introduction. For example, when coaches feel that their superiority over their athletes is questioned, they may resort to controlling behaviours to bring their athletes "back in line," as opposed to try and engage in a conversation with them or understand their perspective.

As expected, the effect of narcissism on coaches' controlling behaviours was in part mediated by empathic concern. Coaches who were higher in narcissism experienced lower levels of empathy and, in turn, reported engaging in more controlling behaviours. This indirect effect was small, but potentially meaningful as it aligns with the existing literature. According to the literature, narcissists' lack of empathic concern is a spontaneous reaction driven by their opportunity to exploit subordinates (Hepper et al., 2014b; Schoel et al., 2015).

Lack of empathy may be an explanation for why narcissistic coaches are unmotivated to try to understand their athletes' feelings and resort in controlling behaviours (e.g., criticism, confrontation, yelling).

Contrary to our hypothesis, narcissism did not have a direct negative effect on autonomy-supportive behaviours. As alluded to in the Introduction, whether narcissists will display autonomy-supportive behaviours or not depends on the expected self-enhancement benefits of such behaviour. Unfortunately, we did not assess this potentially relevant moderator, and this omission might explain the null effects. Consistent with our hypotheses, narcissism had an indirect effect on autonomy-supportive behaviours through empathic concern. Coaches who were higher in narcissism experienced lower levels of empathic concern and, in turn, had a lower likelihood of engaging in autonomy-supportive behaviours. This indirect effect was small, but potentially meaningful for the literature. Empathy is a key motivator of prosocial behaviour, as the ability to share and experience someone else's feelings increases the likelihood of helping (Eisenberg et al., 2010). Thus, non-empathic coaches may be less likely to engage in autonomy-supportive behaviours, because they fail to appreciate how such prosocial acts will make athletes feel.

Contrary to our hypotheses, dominance did not mediate the effects of narcissism on controlling behaviours. Although the correlational pattern amongst narcissism, dominance behaviours, and controlling behaviours was consistent with a potential mediated effect, we detected no such effect in the regression analyses. An explanation for the disparity between the correlation and regression results could be that most of the effect on narcissism on controlling behaviours is direct and that dominance does not have unique predictive capacity over and above narcissism.

Limitations and Future Directions

Our study has limitations. Given that it was based exclusively on coach self-reports, it is possible that coaches' responses were influenced by socially desirable responding. As such, future researchers may seek to replicate the findings by employing observational techniques (i.e., videotaping coach behaviours) or obtaining athlete perceptions of coach behaviours. Additionally, as we used a cross-sectional design, we could not test causality. Future work would need to implicate quasi-experimental designs. For example, one could ask participants, pre-selected based on their narcissism scores (low vs high) to coach an athlete (confederate) in a laboratory task. Next, one would create situations such as those described in the scenarios used, and test whether such situations (e.g., entitlement) impact on the degree to which the narcissistic vs non-narcissistic coach utilises autonomy-supportive and controlling behaviours in interacting with the athlete.

Another limitation concerns the sampling imbalance of male to female coaches. A recent meta-analysis indicated that males are generally more narcissistic than females; however the gender differences were small (Grijalva et al., 2015b). Our sample approximated the gender balance of the UK coach population: Mcllroy (2015) reported a much higher percentage of male (72%) than female (28%) coaches currently working in the United Kingdom. Nevertheless, future research could strive for more balanced coach recruitment based on gender.

Several additional research directions stem from our work. It would be interesting to explore the effect of coach narcissism on athletes' self-determined motivation and associated outcomes (Mageau & Vallerand, 2003). Based on findings that narcissistic leaders are often disliked by their followers (Judge et al., 2006; Schoel et al., 2015), it is possible that athletes coached by narcissists are less satisfied with their coach than athletes coached by non-

narcissists. Additionally, future research could consider athletes' personality, as the dyadic relationship is likely to be influenced by athletes' own narcissism (Wallace et al., 2015). Also, narcissism represents only one third of the Dark Triad (i.e., along with psychopathy and Machiavellianism; Paulhus & Williams, 2002). The Dark Triad factors share common characteristics such as self-promotion, lack of empathy, and aggressiveness. Thus, psychopathy and Machiavellianism could also be explored as antecedents of coach interpersonal styles (Paulhus & Williams, 2002).

In summary, our findings make an important contribution and extension to the SDT literature by demonstrating that personality traits, such as narcissism, predict coaches' likelihood of directly and indirectly utilising controlling behaviours, and of indirectly utilising autonomy support behaviours, in situations in which narcissism could be activated. The study identifies a key antecedent of coaching behaviours. Additionally, the study makes a novel contribution to the personality and social psychology literature by understanding the potential explanatory mechanisms (i.e., empathic concern) of how narcissism predicts behaviours in the sport context.

Perspective

This research is, to the best of our knowledge, the first to examine the role of coach narcissism in sport. Our findings, in combination with much-needed follow-up investigations, could help sport psychology practitioners develop specific strategies for coaches in order to reduce the influence of narcissism on controlling behaviours and to promote autonomy-supportive behaviours. Recent work supports the efficacy of interventions aimed at developing empathy in narcissistic populations (Hepper et al., 2014b). For example, investigations in educational settings have shown that empathic concern can be taught through interventions based on the development of peer-facilitation skills (Hatcher et al., 1994) or via

self-affirmation techniques (e.g., writing about one's important values; Thomaes et al., 2009). Interventions such these may be generalisable to sport coaches.

Based on the Chapter 3 findings, coach narcissism may be an important antecedent of a coach's controlling interpersonal style, both directly and via empathic concern, but not dominance. Given these findings are from a single study, the next chapter will: 1) replicate the current findings by examining coach narcissism in relation to athlete perceptions of controlling behaviours via coach empathic concern and dominance; 2) extend the current findings by examining the relation between athlete perceptions of controlling behaviours and outcomes such as athlete need thwarting and attitudes toward doping in a multilevel model. In the sport context, athletes are nested within teams (i.e., coaches; Arthur & Tomsett, 2015), and as such, examining multilevel model can provide new insights to the relation between the studied variables.

CHAPTER 4

LINKING NARCISSISM, NEED FRUSTRATION, AND DOPING ATTITUDES IN SPORT: A MULTILEVEL INVESTIGATION INVOLVING COACHES AND ATHLETES

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Abstract

Research on coaching (Bartholomew, Ntoumanis, & Thøgersen-Ntoumani, 2009) has shown that coaches can display controlling behaviours that have detrimental effects on athletes' basic psychological needs and quality of sport experiences. The current study extends this literature by considering coach narcissism as a potential antecedent of coaches' controlling behaviours. Further, the study tests a model linking coaches' (n = 59) own reports of narcissistic tendencies, empathic concern, and dominance with athletes' (n = 493) perceptions of coach controlling behaviours, experiences of need frustration, and attitudes toward doping. Multilevel path analysis revealed that coach narcissism was directly and positively associated with dominance and athletes' perceptions of controlling behaviours, and was indirectly and positively associated with athletes' reports of needs frustration. Additionally, athletes' perceptions of coach behaviours were positively associated—directly and indirectly—with attitudes toward doping. The findings advance understanding of controlling coach behaviours, their potential antecedents, and their associations with athletes' attitudes toward doping.

Keywords: coach personality, controlling coaching, self-determination theory, need frustration, multilevel path analysis

Introduction

According to self-determination theory (SDT; Ryan & Deci, 2002), individuals in positions of authority may display a controlling interpersonal style of communication, which is likely to be motivationally detrimental to those with whom they interact. Controlling interpersonal style is an example of controlling socialization reflecting pressure from outside of a person (e.g., deadlines, punishment, or rewards imposed by individuals in positions of authority; i.e., between-level variables in a multilevel framework) or pressure from within a person (e.g., guilt-induction, shame; i.e., within-level; Soenes & Vansteenkiste, 2010). In sport, controlling coaches frequently act in a forceful pressuring manner, coercing ways of thinking, feeling, and behaving upon their athletes (Bartholomew et al., 2009). These coaches use numerous strategies to influence their athletes, such as yelling, imposing opinions, making normative comparisons, issuing calculating statements, and offering contingent affection (Bartholomew et al., 2009). Such a controlling interpersonal style can frustrate athletes' basic psychological needs, undermine their self-determined motivation, and produce maladaptive affective, cognitive, and behavioural outcomes, including favorable attitudes toward doping (Bartholomew et al., 2009; Hodge, Hargreaves, Gerrard, & Lonsdale, 2013).

Unfortunately, there is a scarcity of empirical research on antecedents of such a controlling interpersonal style (for a review and an integrative model of such antecedents, see Chapter 2). We believe that it is important to understand not only how coaches shape athletes' sporting experience, but also why coaches might behave in a controlling manner (Occhino, Mallet, Ryanne, & Carlisle, 2014). Hence, the purpose of this study was to examine — whether coaches' reports of their narcissism, empathic concern, and dominance are associated with athletes' perceptions of controlling coach behaviours, and whether the latter are associated with athletes' frustrated needs and positive attitudes toward doping. These

interrelated research questions were tested in an integrative fashion via multilevel path analysis.

Narcissism as an Antecedent of Controlling Behaviours

Based on the Mageau and Vallerand (2003) coach–athlete relationship model, Chapter 2 reviewed, across several life domains, three categories of antecedent variables thought to influence behaviours of individuals in positions of authority. These categories are context (e.g., administrative pressure), perceptions of others' motivation (e.g., self-determined or controlled motivation), and personal characteristics (e.g., personality factors; Pelletier, Seguin-Levesque, & Legault, 2002; Stebbings, Taylor, Spray, & Ntoumanis, 2012). The last category, personal characteristics (i.e., personality and stable beliefs), has received scarce attention in the sport domain (Chapter 2). As such, limited empirical research has been conducted investigating whether personality factors predict coach use of controlling behaviours.

As an exception to this status quo, Chapter 3 asked whether narcissism qualifies as a potential antecedent of coaches' controlling interpersonal style. Narcissism is a self-centred, self-aggrandising, dominant, and manipulative interpersonal orientation (Emmons, 1987; Sedikides, Rudich, Gregg, Kumashiro, & Rusbult, 2004). Narcissistic individuals strive to assume leadership positions that allow them to be recognised as leaders. They seek attention and admiration, and focus on gaining personal benefit even when undermining others (Campbell, Hoffman, Campbell, & Marchisio, 2011). Narcissistic individuals look relentlessly for validation and pursue situations where they can exert authority and superiority over others (Morf & Rhodewalt, 2001). Narcissism has been linked with negative leadership qualities and lack of leadership effectiveness (Schoel, Stahlberg, & Sedikides, 2015). Narcissistic leaders utilize manipulations and conceit that culminate in abusive supervision

behaviours (e.g., anger outbursts, taking credit for subordinate success; Keashly, Trott, & MacLean, 1994; Keller Hansbrough & Jones, 2014). As coaching provides an opportunity for leadership and power, it may attract narcissistic individuals. Chapter 3 showed that narcissistic coaches report greater use of controlling behaviours toward athletes in situations in which coaches experience self-threat.

Empathic Concern and Dominance as Mediators of the Relation between Narcissism and Controlling Behaviours

A potential explanation for the possible negative relation between narcissism and controlling behaviours is reduction in empathic concern among narcissistic individuals (Hepper, Hart, Meek, Cisek, & Sedikides, 2014a; Rosenthal & Pittinsky, 2006). Empathic concern is a component of empathy that describes a person's ability to experience others' emotions, and feel sympathy and compassion (Davis, 1983). Importantly, a negative association between narcissism and empathic concern has been identified in the literature (Trumpeter, Watson, O'Leary, & Weathington, 2008). Coaches with increased narcissism and lower levels of empathic concern may be less able to anticipate the negative feelings experienced by their athletes when these coaches act in a controlling manner. Consistent with this possibility, Chapter 3 demonstrated that reduced empathic concern mediated a positive predictive effect of narcissism on controlling behaviours among sport coaches. However, this study was based solely on coaches' reports of their controlling behaviours. As such, it is not known whether empathic concern mediates any effects of narcissism on athletes' perceptions of their coach's controlling behaviours; the current study explores this issue. There is an evidence to suggest that coach and athlete reports may be weakly related. Indeed, research has found a weak association between coach interpersonal style and athletes' perceptions of their coach's interpersonal style (Smoll, Smith, & Cumming, 2007).

Narcissistic individuals also tend to have a high need for dominance. Dominance is the self-aggrandising component of power that regulates strictly subordinates' resources and establishes superiority over them (Emmons, 1984; Keltner, Gruenfeld, & Anderson, 2003). Narcissistic leaders may dominate their subordinates through displays of harassment (Horton & Sedikides, 2009). As such, narcissistic coaches may seek to establish superiority over their athletes via the enactment of pressuring and intimidating (i.e., controlling) behaviours (Bartholomew et al., 2009). Support for this contention can be found in the non-sport literature, which suggests that dominance mediates the effect of narcissism on controlling-type behaviours (e.g., aggression, hostility; Ojanen, Findley, & Fuller, 2012; Raskin, Novacek, & Terry, 1991). However, although Chapter 3 found coach narcissism to be a strong positive predictor of dominance, dominance was not associated with controlling behaviours. Given that this latter finding contradicted Chapter 3 hypothesis and, importantly, is inconsistent with the non-sport literature, we aimed in the current research to re-examine the relations among coach narcissism, dominance, and controlling behaviours. In contrast to Chapter 3 though, we assessed controlling coach behaviours via athlete report rather than coach report.

Athlete Perceptions of Controlling Behaviours, Need Frustration, and Doping Attitudes

Experiencing controlling behaviours in sport can have undermining and pathogenic effects on athletes' three basic psychological needs of autonomy, competence, and relatedness (Ntoumanis, 2012). Autonomy is the need to feel volitional about participating in one's sport, competence is the need to feel skilled when engaging in that sport, and relatedness is the need to feel connected and accepted by the sport milieu (e.g., teammates or coach). Satisfaction of these basic psychological needs is crucial, because it contributes to individuals feeling autonomous, efficacious, and connected with others (Ryan & Deci, 2000). As such, need

satisfaction is linked to individuals' optimal functioning and well-being, such as positive affect (Bartholomew, Ntoumanis, Ryan, Bosch, &Thøgersen-Ntoumani, 2011a). On the contrary, perceptions of the basic psychological needs as being actively damaged is referred to as need frustration (Bartholomew, Ntoumanis, Ryan, &Thøgersen-Ntoumani, 2011b). When their basic psychological needs are frustrated, individuals feel oppressed, inadequate, and rejected by others (Ryan & Deci, 2000). As such, need frustration is linked to individuals' suboptimal functioning and ill-being, such as self-injurious behaviours (e.g., eating disorders; Bartholomew et al., 2011a; Vansteenkiste, Claes, Soenens, & Verstuyf, 2013). Specifically, athletes who experience frustration of their basic psychological needs are more likely to engage in eating disorders (Bartholomew et al., 2011a). This finding suggests that self-injurious behaviours may result from athletes feeling controlled, inadequate, or rejected.

Factors that influence need frustration, such as controlling behaviours, are important to understand in order to clarify further the link between need frustration and detrimental outcomes. Recent research has reported a positive relation between athletes' perceptions of controlling coach interpersonal style and need frustration (Balaguer et al., 2012). In particular, the more coaches adopted controlling strategies, the more athletes perceived their needs to be undermined. Putting pressure and intimidating athletes to gain personal benefit could make them feel oppressed and inadequate. Hence, and in view of the aforementioned expected relations between narcissism and controlling behaviours, we hypothesise that coaches higher in narcissism enact more frequently controlling behaviours toward their athletes, and, as such, frustrate the latter's needs. Such a hypothesis has not been previously tested in the literature.

One self-injurious behaviour in sport that may be influenced by need frustration is the intentional use of performance-enhancement drugs (PEDs; ergogenic substances ingested for performance enhancement; WADA, 2015), often referred to as doping. Many PEDs have side

effects with potentially serious health consequences (Petróczi, 2013a; WADA, 2015); in this way doping represents a form of self-injurious behaviour. Further, doping is banned in most sports and therefore constitutes a form of cheating. Attitudes toward doping are a key psychological predictor of doping use and intentions to dope in athletes, and, as such, are considered an alternate for doping behaviour when obtaining data on the latter is not feasible (Lazuras, Barkoukis, Rodafinos, & Tzorbatzoudis, 2010; Ntoumanis, Ng, Barkoukis, & Backhouse, 2014; Petróczi & Aidman, 2009).

Favorable attitudes toward doping depict the use of performance enhancement drugs as beneficial, useful, or ethical (Petróczi & Aidman, 2009). These attitudes are influenced by one's social environment. As such, athletes who experience frustration of their needs in controlling environments may develop more positive attitudes toward doping, because they feel oppressed or rejected and consider "doping" a mean to satisfy their needs. Those athletes may be tempted to do anything to perform well and satisfy their coaches' expectations, and may thus be likely to form positive attitudes toward doping.

Hodge et al. (2013) reported that athletes' perceptions of controlling coach interpersonal style predicted athletes' positive attitudes toward doping. Hodge et al. also examined the role of non-self-determined motivation in relation to athletes' perceptions of controlling behaviours and attitudes toward doping, but obtained null effects. Evidence suggests that basic psychological needs explain variance in sport-related outcomes over and above variance explained by motivational regulations (Felton & Jowett, 2015). Hence, in an attempt to extend the Hodge et al. findings, we tested whether controlling coach behaviours predict positive athlete attitudes toward doping via the frustration of athletes' psychological needs. Links between need frustration and doping-related variables have not been previously tested in the SDT literature.

When investigating the effects of coach behaviour on athletes, it is important to examine effects at both the group (between) and individual (within) levels. Research involving data from coaches and athletes within teams is inherently multilevel because athletes are nested within teams/coaches (Arthur & Tomsett, 2015). As such, relations occur at more than one level, the individual (within-level) and the group level (between-level). Variables can also be measured at different levels, such as athletes' perceptions of coach behaviours (within-level) and coaches' self-reports (between-level). Furthermore, observations (i.e., athletes) are not independent, which is an assumption that underlies analysis of variance and ordinary least squares regression. These issues highlight the need to account for the non-independence among observations using multilevel analysis (Hox, 2010). Individuals in a group or context tend to be more similar on many variables (e.g., attitudes, behaviour) compared to individuals in different groups or contexts (Heck & Thomas, 2015). As such, it is important to account for associations at both levels when analysing nested data (Byrne, 2012).

Aims and Hypotheses

Our primary aim was to test a hypothesised multilevel model (Figure 1) proposing (1) positive relations between coach narcissism and dominance, and between athlete-reported controlling coach behaviours, need frustration, and attitudes towards doping at the between-level, as well as (2) negative relations between coach narcissism and empathic concern, and between coach empathic concern and athlete-reported controlling coach behaviours at the between-level, and (3) positive relations between athlete-reported controlling coach behaviours, need frustration, and attitudes towards doping at the within-level. In addition to these direct effects, we hypothesised positive indirect effects from (1) coach narcissism to athlete-reported controlling coach behaviours via coach empathic concern and dominance at

the between-level, (2) coach narcissism to athlete need frustration via athlete-reported controlling coach behaviours on the between-level, as well as (3) athlete-reported controlling coach behaviours to attitudes toward doping via need frustration at the between- and within-level, respectively.

Method

Participants

Participants were 493 athletes (328 male, 165 female; age ranging between 16-53 years, M_{age} = 21.22, SD_{age} = 3.65,) and 59 accredited coaches (48 males, 11 females; age ranging between 20-68 years, M_{age} = 35.90, SD_{age} = 12.71) from different levels of competition (e.g., regional, national, international) across the UK; each athlete was linked to only one coach. A variety of sports (e.g., rugby, soccer, swimming) were represented. On average, coaches had 12.71 (*SD* = 9.24) years of coaching experience, and athletes had practiced their sport for an average of 7.10 (*SD* = 5.11) years.

Measures

Narcissism. We assessed coach narcissism with the 40-item Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988), which uses a forced-choice approach whereby participants are required to choose, for each item, between a narcissistic (e.g., "I like having authority over people") or a non-narcissistic (e.g., "I don't mind following orders") statement. NPI scores range from 0 to 40, with higher scores reflecting increased narcissism. We scored each narcissistic statement as 1, and each non-narcissistic statement as 0. We calculated the total score by adding up the narcissistic responses. The NPI has high construct validity and internal consistency (Raskin & Terry, 1988).

Dominance. We assessed coach dominance with the 11-item International Personality Item Pool (IPIP: Goldberg et al., 2006), which is based on the California Personality

Inventory (CPI; Wink & Gough, 1990). Response options ranged from 1 (*very inaccurate*) to 5 (*very accurate*). A sample item is: "Lay down the law to others." The IPIP has high construct validity and internal consistency (Goldberg et al., 2006).

Empathic concern. We assessed coach empathy with the 7-item empathic concern subscale of the Interpersonal Reactivity Scale (IRI; Davis, 1983). Response options ranged from 0 (*does not describe me well*) to 4 (*describes me well*). A sample item is: "I am often quite touched by things that I see happen." The scale has good construct validity and internal consistency (Davis, 1983).

Controlling coach behaviours. We assessed athletes' perceptions of their coach's controlling behaviours using the 15-item Controlling Coach Behaviors Scale (CCBS; Bartholomew, Ntoumanis, & Thøgersen-Ntoumani, 2010). Response options ranged from 1 (*strongly disagree*) to 7 (*strongly agree*). A sample item is: "My coach tries to control what I do during my free time." The scale has good construct validity and internal consistency (Bartholomew et al., 2011a).

Need frustration. We assessed need frustration using the 12-item Psychological Need Thwarting Scale (PNTS; Bartholomew et al., 2011b). The PNTS includes three subscales corresponding to athletes' autonomy, competence, and relatedness needs. Response options ranged from 1 (*strongly disagree*) to 7 (*strongly agree*). A sample item is: "I feel I am rejected by those around me." The scale has high construct validity and internal consistency (Bartholomew et al., 2011a).

Attitudes toward doping. Finally, we assessed athletes' attitudes toward doping with the 5-item version of the Performance Enhancement Attitude Scale (PEAS; Petróczi & Aidman, 2009). A sample item is: "The risks related to doping are exaggerated." Response options ranged from 1 (*strongly disagree*) to 6 (*strongly agree*). This scale has satisfactory

construct validity and acceptable internal consistency (α = .67; Gucciardi, Jalleh, & Donovan, 2011).

Procedure

We recruited coaches and athletes via sport club websites and existing contacts. After gaining approval from the ethics board of the first author's institution, we explained the purpose and procedure of the study to coaches and athletes, and obtained written consent to participate from both parties. We reminded them that their participation was voluntary, and all information provided would be completely confidential. The first author and three trained research assistants collected the data.

Data Analyses

First, we calculated intraclass correlation coefficients (ICC) for relevant variables. ICC determines the amount of variance in variables at the between-level as a ratio to that at the within-level, and is important for determining whether there was enough between-level variance to support their decomposition into the within- and between-levels (Preacher, Zyphur, & Zhang, 2010). If there is sufficient common variance at the between-level, it is suggested there is homogeneity within groups that distinguishes them from one another (Heck & Thomas, 2015). If ICCs of multiple variables is below .05, it may encourage the instability of the indirect effect with potentially large bias (Preacher et al., 2010). Then, we used multilevel path analysis via Mplus 7.3 software (Muthén & Muthén, 1998-2015). In MSEM, regression paths among the variables are included at the within- (athlete) and between- (coach and athlete aggregate scores) levels, allowing examination of indirect effects for both within- and between-level components, with each controlling for the other. We estimated simultaneously the direct and indirect effects at the within- and between-levels. The analysis provided standard errors and chi-square tests of model fit that accounted for the non-

independence of observations due to the clustering of athletes within coaches (Muthén & Muthén, 1998-2015). We used the full information maximum likelihood (FIML) estimation to account for missing data under the missing at random assumption (Muthén & Muthén, 1998-2015). To provide model fit and standard errors that account for non-normality we used robust maximum likelihood (MLR) estimation (Muthén & Muthén, 1998-2015) and assessed model fit using χ^2 goodness-of-fit index, root mean-square error of approximation (RMSEA), comparative fit index (CFI), Tucker-Lewis index (TLI), and square root mean residual (SRMR) at both the within- and between-levels (Preacher et al., 2010). CFI and TLI values exceeding .95 are indicative of good fit, while SRMR (within-level) and RMSEA values $\leq$ .08 and .06, respectively, are considered satisfactory (Hu & Bentler, 1999). By default, Mplus software performs an implicit latent group-mean centering of the latent within-level variable (Muthén & Muthén, 1998-2015). Therefore, no centering was needed prior to conducting the MSEM analyses.

We calculated indirect effects using the RMediation package via the distribution-of-the-product method (Tofighi & McKinnon, 2011). We used this method, because it can account for correlations between *a* (predictor-mediator) and *b* (mediator-outcome) paths (Tofighi & McKinnon, 2011); not doing so can produce inaccurate indirect effects, because of the covariance between the two paths (Kenny, Bolger, & Korchmaros, 2003). We calculated the indirect effects as the product of the *a* and *b* paths. We determined the statistical significance of the indirect effects via 95% confidence intervals (CIs). A 95% CI not containing zero indicates a statistically significant indirect effect (Preacher & Hayes, 2008). We calculated effect sizes for indirect effects via kappa squared (κ^2; Preacher & Kelley, 2011). κ^2 is the ratio of the obtained indirect effect to the maximum possible indirect effect (Preacher & Kelley, 2011). κ^2 is standardized and bounded using an interpretable metric (0 to

1), is independent of sample size and, with bootstrap methodology, allows for confidence interval construction. According to Preacher and Kelley (2011), κ^2 ratios are interpreted based on Cohen's (1998) guidelines with effect sizes ranging from small (.01), through medium (.09), to large (.25).

Results

We present descriptive statistics and inter-correlations for all study variables in Table 4.1. Correlation coefficients were in the expected direction and ranged in effect size from small to medium. The ICC for athletes' perceptions of controlling behaviours, need frustration, and attitudes toward doping variables ranged from .05 to .30. The fit indices for our *a priori* hypothesised model indicated very good model fit: $\chi^2(5) = 8.10$, $p = 0.15$, CFI = .98, TLI = .94, RMSEA = .04, SRMR (within) = .00, SRMR (between) = .09.

Table 4.1

Descriptive Statistics, Between-Level and Within-Level Correlations between Study Variables and Intraclass Correlations

	Variable	1	2	3	4	5	6	ICC
1.	Narcissism	**.85**						-
2.	Dominance	.65**	**.86**					-
3.	Empathic Concern	-.03	-.15	**.78**				-
4.	Athletes' perceptions of controlling behaviours	.31*	.14	.07	**.90**	*.45***	*.19***	.30
5.	Need frustration	.06	-.05	-.03	.86**	**.91**	*.21***	.17
6.	Attitudes toward doping	-.09	.26	-.14	.13	.37	**.63**	.05
	Possible Range	0-40	1-5	0-4	1-7	1-7	1-6	
	M	14.23	3.11	3.09	2.67	2.53	2.46	
	SD	6.74	.52	.40	1.07	1.11	.85	
	Skewness	.962	-.125	-.529	.336	.389	.353	
	Kurtosis	.997	-.224	.046	-.682	-.553	- .235	

Note. ICC = Intraclass correlation coefficients. Raykov (2009) composite reliability coefficients are in bold along the diagonal. Between-level correlations coefficients are represented on the left side of diagonal. Within-level correlation coefficients are represented on the right side of diagonal and are in italics. *$p < .05$, **$p < .01$.

We measured coach narcissism, empathic concern, and dominance at the between-level only (i.e., coach data); we decomposed athletes' perceptions of controlling coach behaviours, need frustration, and attitudes toward doping into latent within- (level 1) and between-level (level 2) components[2]. We report all direct and indirect effects, *p* values, κ^2, and 95% CIs in Figure 4.1 and Table 4.2.

Table 4.2

Indirect Effects and Asymmetric CIs

			95 % CI		
	Estimate[a]	*SE*	LL	UL	κ^2
Within					
Acon→NF→dop	0.08	0.03	0.03	0.13	0.07
Between					
Narc→dom→acon	0.22	0.42	-1.05	0.59	0.05
Narc→empat→acon	-0.01	0.09	-0.21	0.16	0.00
Narc→acon→NF	0.85	0.45	0.02	1.79	0.50
dom→acon→NF	0.05	0.10	-0.25	0.14	0.15
empat→acon→NF	0.04	0.10	-0.15	0.24	0.14
acon→NF→dop	0.12	0.33	-0.52	0.77	0.13

Note. [a]unstandardised estimate. SE = standard error; CI = confidence interval; LL = lower limit; UL = upper limit; κ^2= kappa squared; acon = athletes' perceptions of coach controlling behaviours; NF = athlete need frustration; dop = athlete attitudes toward doping; Narc = coach narcissism; dom = coach dominance; empat = coach empathic concern.

[2] A reviewer requested to investigate the role of each need frustration (i.e., need for competence, autonomy, and relatedness) and each controlling behaviour (i.e., controlling use of rewards, intimidation, negative conditional regard, and excessive personal control) independently in the model. We ran such models but they produced inadmissible solutions. As an alternative, we have tested for the correlations between each need frustration subscale with and attitudes toward doping, and between each controlling behaviours subscales and doping attitudes, at both the within- and between-levels. The correlation matrix for the individual need frustration subscales showed similar correlations compared to the correlations between overall need frustration and doping attitudes. Similarly, the correlation matrix for the controlling subscales showed similar correlations compared to the correlations between overall controlling behaviours and doping attitudes (with the exception of the controlling use of rewards-doping attitudes correlation which was non-significant). These results are available from the first author upon request.

With respect to the first aim of the study, the findings at the between-level showed that coach narcissism was positively associated with athletes' perceptions of controlling coach behaviours and dominance, and athletes' perceptions of controlling coach behaviours were positively associated with need frustration. However, the effects of dominance on athletes' perceptions of controlling coach behaviours, the effects of need frustration on attitudes toward doping, as well as athletes' perceptions of controlling coach behaviours on athlete attitudes toward doping, were not statistically significant. With respect to the second aim of our study, the findings at the between-level showed that the effects of coach narcissism on empathic concern, as well as empathic concern on athletes' perceptions of controlling coach behaviours were not statistically significant. With respect to the third aim of our study, the findings at the within-level showed that athletes' perceptions of controlling behaviours were positively associated with need frustration, and need frustration was positively related to attitudes toward doping. Additionally, athletes' perceptions of controlling coach behaviours were positively related to athletes' attitudes toward doping.

We obtained a statistically significant indirect effect at the between-level; this was the effect of coach narcissism on athlete need frustration through athletes' perceptions of controlling coach behaviours ($a*b$ = .85, [.02, .1.79]); the effect size was large (κ^2= .50; Table 4.2). Further, the indirect effect of athletes' perceptions of controlling coach behaviours on athlete attitudes toward doping through athlete need frustration was statistically significant ($a*b$ = .08, [.03, .13]) and had a small effect size (κ^2 = .07; see Table 2).

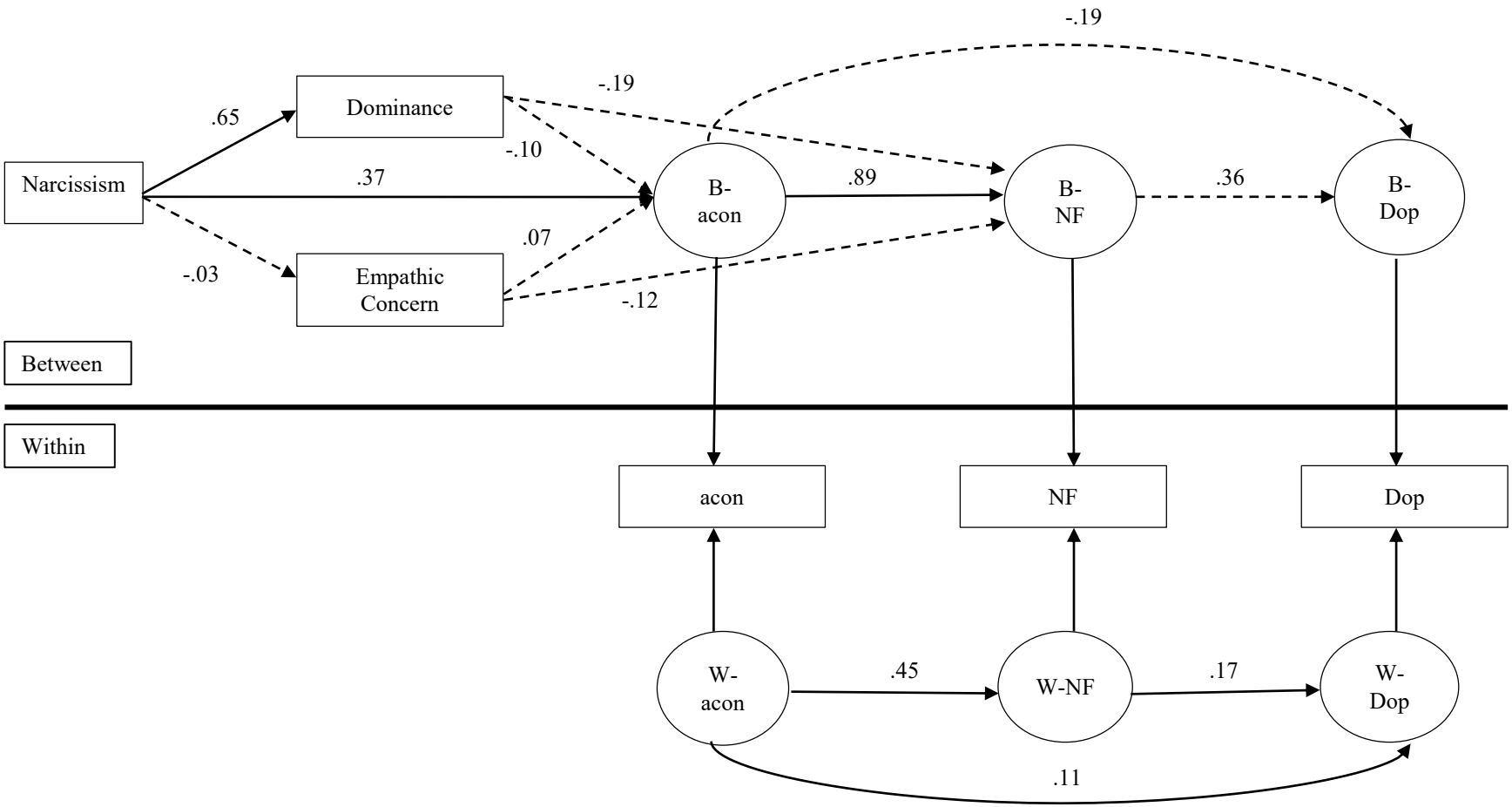

Figure 4.1. Multilevel path analysis model testing coach narcissism, dominance and empathic concern in relation to athletes' perceptions of coach behaviours, need frustration, and attitudes toward doping. *Note:* Model displays results of both within- and between-level analyses. Dashed lined represent non-significant relations. acon = athletes' perceptions of coach controlling behaviours; NF = athlete need frustration; dop = athlete attitudes toward doping; W = within-level; B = between-level; **p* < .05, ***p* < .01

Discussion

We addressed the role of narcissism as an antecedent of coach controlling behaviours. To that effect, we proposed a multilevel model linking coach controlling behaviours with athletes' frustrated needs and positive attitudes toward doping use (an indicator of compromised athlete functioning). In the tested model, we used coach and athlete data to examine the direct and indirect associations between coach reported narcissism, dominance, and emphatic concern, and athletes' perceptions of controlling coach behaviours at the between-level. We also examined associations between athletes' perceptions of controlling coach behaviours, need frustration, and attitudes towards doping in sport at the between- and within-levels, respectively. In this chapter, research questions related to specific aspects of models were tested rather than the overall mediated effects, and therefore, the full process was omitted.

Coach Narcissism, Coach Controlling Behaviours, and Athletes' Need Frustration on the Between-Level

Coach narcissism was positively associated with athletes' perceptions of controlling coach behaviours at the between-level. As such, the higher the narcissism coaches reported, the more frequently athletes perceived them to engage in controlling behaviours (e.g., punishing their athletes, imposing deadlines, and using task-engagement rewards). This is consistent with recent findings that coach narcissism positively predicts coaches' self-reported controlling behaviours (Chapter 3). Here, we replicated this finding using athletes' perceptions of coach controlling behaviours. Thus, coaches who report narcissistic elements such as authority, self-sufficiency, entitlement, or exhibitionism are rated by themselves and others as more controlling.

Although narcissism – as expected – was positively related to dominance, we found no

effect of dominance on athletes' perceptions of controlling behaviours at the between-level. This pattern parallels that of Chapter 3. Taken together, these two studies suggest that, although coach dominance is positively predicted by narcissism, any effect of narcissism on coaches' controlling behaviours may be direct rather than operating through dominance. Future research in sport will do well to examine other possible mediators, such as beliefs about the normalcy and effectiveness of controlling behaviours (Reeve et al., 2014).

Empathic concern did not mediate the relation between coach narcissism and athletes' perceptions of controlling coach behaviours at the between-level. Specifically, coach narcissism did not relate to empathic concern, and empathic concern did not relate to athletes' perceptions of controlling behaviours. This is contrary to the work of Chapter 3, in which such effects were significant. Interestingly, research outside of sport has reported mixed findings when examining the relation between narcissism and empathic concern (Hepper, Hart, Meek, Cisek, & Sedikides, 2014a; Trumpeter et al., 2008). Of particular note, Hepper et al. (2014a) found that narcissism did not directly relate to empathic concern, but cognitive components of empathy (i.e., perspective taking) did. Future empirical efforts could focus on cognitive components of empathy alongside its emotional components to tease out the possible mediating role of empathic concern in the coach narcissism-controlling behaviours relation.

Coach narcissism was indirectly linked to athletes' frustrated needs via athletes' perceptions of controlling coach behaviours at the between-level. This indirect effect was large and meaningful for extending previously reported direct effects between narcissism and controlling coach behaviours (Chapter 3), and between athletes' perceptions of controlling coach behaviours and need frustration (Bartholomew et al., 2011a). Hence, it seems that, when narcissistic coaches exhibit external controlling characteristics such as imposing

deadlines, punishing athletes, and using engagement-contingent rewards, athletes are more likely to feel oppressed, inadequate, or rejected.

Predicting Attitudes toward Doping at the Between- and Within-Levels

Athletes' perceptions of controlling coach behaviours did not have an effect on athletes' attitudes toward doping at the between-level, either directly or via need frustration. Although athletes' perceptions of controlling coach behaviours positively predicted need frustration, the latter was not associated with athletes' attitudes toward doping. However, this relation was in the anticipated direction and had a moderate effect size. Thus, the lack of statistical significance may have been due to the relatively small sample size at the between-level, as well as the limited amount of variance in doping attitudes to be explained at the between-level (i.e., ICC = .05). The minimal variance in doping attitudes at the between-level may in turn be due to the private and secretive nature of doping. In other words, attitudes toward doping are infrequently shared with others, which may prevent the formation of group-level doping attitudes (Petróczi, 2013a).

At the within-level, however, athletes' perceptions of controlling coach behaviours were positively related to athletes' attitudes toward doping. This is consistent with the findings of Hodge et al. (2013), namely that athletes' perceptions of controlling coach climates positively predict athletes' doping attitudes. Athletes who experience pressure to perform at their best from their coach may be likely to have more positive attitudes towards doping. This is possibly because athletes view ethically questionable means of performance enhancement more favourably given that those may help them satisfy their coach's demands for high performance (Hodge et al., 2013; Smith et al., 2010).

We extended the work of Hodge et al. (2013) by showing that need frustration was a mediator of the relation between athletes' perceptions of controlling behaviours and athletes'

attitudes toward doping. Although the indirect effect was small, it may be potentially meaningful for the literature. Athletes who perceive their coaches as controlling could feel oppressed, inadequate, or rejected (Balaguer et al., 2012). Feeling inadequate and rejected may lead athletes to develop more positive attitudes toward doping (and potentially use illegal performance enhancing substances), as a result of their desire to increase their competence and relatedness (feelings of acceptance by the coach) by accomplishing success. Such need restoration efforts (cf. Radel, Pelletier, Sarrazin, & Milyavskaya, 2011) are important to address in future research on doping.

Summary, Limitations, and Future Directions

We acknowledge several limitations, which point to research directions. The study was based on self-report data, which are amenable to socially desirable responding (Gonyea, 2005). Future research may consider alternative assessments, such as observational methods for coach behaviours and implicit measures for doping attitudes (Petróczi, 2013b). Additionally, given the low internal consistency of the attitudes toward doping measure (Gucciardi et al., 2011), future research should test the replicability of the current findings using different measures of attitudes toward doping (e.g., full 17-item PEAS; Petróczi & Aidman, 2009). Further work should also employ longitudinal designs to examine the temporal ordering of the relations among the study variables, with particular emphasis on testing need restoration efforts via engaging in doping use. Additionally, researchers could examine the moderating role of sport type on the effect of controlling coach behaviours on attitudes toward doping. Controlling behaviours may have a stronger effect on doping attitudes in some sports (e.g., strength based, endurance based) because doping is seen as more effective for the key performance attributed in those sports compared to others.

Our study was concerned with the relation between grandiose narcissism (i.e., NPI narcissism) and controlling interpersonal style. Future research could test the relations between other forms of narcissism, such as vulnerable narcissism (Gregg & Sedikides, 2010) and coach controlling interpersonal style. Additionally, researchers could address other components of the dark triad beyond narcissism (i.e., Machiavellianism, psychopathy; Paulhus & Williams, 2002). The "dark triad" factors share common traits such as self-promotion, lack of empathy, and aggressiveness, and hence they might also serve as proximal and distal antecedents of coach controlling behaviours, athletes' frustrated needs, and attitudes toward doping. Finally, researchers could examine the interplay between coach and athlete narcissism (Arthur, Woodman, Ong, Hardy, & Ntoumanis, 2011). For example, it would be interesting to test how athletes high and low on narcissism experience need frustration when interacting with narcissistic coaches, or the types of behaviours coaches use when interacting with narcissistic athletes.

The results of the current study make novel contributions to the literature by testing the proximal and distal antecedent role of coach narcissism on athletes' perceptions of controlling coach behaviours and feelings of compromised psychological needs. We showed that these antecedents can positively predict a highly topical issue, athletes' positive attitudes toward doping. The study makes additional novel contributions and further extends previous literature by examining the relations among coach personality, coach and athlete motivational factors, and athlete doping attitudes via obtaining reports from both coaches and athletes and via testing such relations simultaneously within a multilevel path analysis framework.

The findings of the current chapter replicated Chapter 3 findings by examining coach narcissism in relation to athlete perceptions of controlling behaviours via coach empathic concern and dominance. It was found that narcissism was positively related to dominance,

however dominance was not a significant mediator. Contrary to Chapter 3, empathic concern did not mediate the relation between narcissism and athlete perceptions of controlling behaviours. Additionally, the current chapter extended on Chapter 3 findings by examining the relation between athlete perceptions of controlling behaviours and attitudes toward doping via athlete need frustration on the between- and within-levels. Athlete perceptions of controlling coach behaviours were linked positively to athlete need frustration on the within- and between-levels; however athlete perceptions of controlling behaviours were positively related to attitudes toward doping via athlete need frustration at the within-level only.

Chapter 3 examined the controlling behaviours via self-reported responses of coaches to the scenarios and Chapter 4 examined controlling behaviours via athletes' perceptions. Both Chapters 3 and 4 examined overall score of narcissism. The next chapter will extend these findings by 1) examining controlling coach behaviours via self-reported controlling behaviours measured by established questionnaire, 2) distinguishing between adaptive and maladaptive facets of narcissism.

Additionally, based on Reeve et al. (2014), effectiveness and normalcy beliefs about interpersonal style may be potential mediators between external factors and interpersonal style. For example, narcissism may be a potential factor that shapes one's beliefs about a controlling interpersonal style being an effective way to achieve success. As such, the next chapter will examine effectiveness and normalcy beliefs about interpersonal style as additional potential mediators between narcissism (i.e., adaptive, maladaptive, overall) and controlling coach behaviours. Finally, to extend on the findings of the current chapter, that is, the positive link between controlling behaviours and morality-related outcomes of need frustration and attitudes toward doping, the next chapter will examine an additional morality-related outcome of controlling coach behaviours (i.e., coach moral disengagement).

CHAPTER 5

NARCISSISM, BELIEFS ABOUT CONTROLLING INTERPERSONAL STYLE, AND MORAL DISENGAGEMENT IN SPORT COACHES

Abstract

We tested the relations among narcissism (including both its adaptive and maladaptive facets), effectiveness and normalcy beliefs about controlling interpersonal style, controlling coach behaviours, and moral disengagement in sport coaches. Participants were 210 sport coaches, representing a variety of sports and levels of coaching. Coaches completed a multi-section questionnaire assessing the study variables. Path analyses revealed that narcissism and maladaptive narcissism positively predicted controlling coach behaviours. Furthermore, effectiveness and normalcy beliefs about controlling interpersonal style positively predicted controlling coach behaviours, while controlling coach behaviours positively predicted coach moral disengagement. Finally, effectiveness beliefs about controlling interpersonal style mediated the relation between adaptive narcissism and controlling coach behaviours. These findings contribute to the literature on antecedents and outcomes of controlling coach behaviours, as reported by coaches.

Keywords: adaptive narcissism, maladaptive narcissism, controlling coach behaviours, self-determination theory, coaching

Introduction

Coaches are key authority figures in sport, hence, the interpersonal styles they utilise when communicating with their athletes can play a critical role in shaping athletes' psychological experiences in sport. Although some interpersonal styles can be beneficial in that they support athletes' psychological needs, other styles can be controlling and can undermine athletes' psychological needs and well-being (Bartholomew, Ntoumanis, Ryan, Bosch, & Thøgersen-Ntoumani, 2011a). Whilst there is ample evidence on interpersonal styles that support athletes' psychological needs, comparatively less is known about controlling styles and in particular their antecedents (Ntoumanis, 2012). A theoretical framework for studying a controlling interpersonal communication style is self-determination theory (SDT; Ryan & Deci, 2002). According to Ryan and Deci, such a style reflects a set of behaviours whereby the agent (e.g., coach) acts in pressuring or coercive ways, imposing ways of thinking, feeling, and behaving upon their athletes (Bartholomew, Ntoumanis, & Thøgersen-Ntoumani, 2009). A controlling interpersonal style has been associated with negative athlete outcomes, such as psychological need frustration, ill-being, and athlete moral disengagement (Curran, Hill, Ntoumanis, Hall, & Jowett, 2016; Healy, Ntoumanis, van Zanten, & Paine, 2014; Hodge & Gucciardi, 2015). Although considerable research efforts have focused on how controlling coaching can shape athletes' experiences, only minimal research attention has been given to the antecedents of such style (i.e., why coaches behave that way; for exceptions, seethe comprehensive model in Chapter 2; also, Occhino, Maller, Ryanne, & Carliste, 2014). One such antecedent category is coaches' personality. We focus on this putative antecedent category, and in particular on narcissism.

Narcissism is a self-centred, arrogant, and manipulative interpersonal orientation (Arthur, Woodman, Ong, Hardy & Ntoumanis, 2011; Sedikides, Rudich, Gregg, Kumashiro,

& Rusbult, 2004). Of potential importance from a sport coaching perspective, narcissistic leaders strive to assume leadership positions and engage in situations that provide them with opportunities for admiration and self-enhancement (Mathieu & St-Jean, 2013; Woodman, Roberts, Hardy, Callow, & Rogers, 2011). Further, they take credit for successes, but displace blame for failures on others (Campbell, Reeder, Sedikides, & Elliot, 2000). Narcissistic individuals crave validation and seek out situations involving social interaction where they can exhibit their superiority over others (Morf & Rhodewalt, 2001). In addition, they exploit others for personal gain (Sedikides, Campbell, Reeder, Elliot, & Gregg, 2002), are unwilling to treat others respectfully (Campbell, Hoffman, Campbell, Marchisio, 2011), and lack moral sensibility due to a preoccupation with the self (Roberts, 2007).

Perhaps unsurprisingly, narcissism has been linked with negative leadership qualities and lack of leadership effectiveness (Grijalva, Harms, Newman, Gaddis, & Fraley, 2015a; Schoel, Stahlberg, & Sedikides, 2015). Narcissistic leadership has also been recently explored within the coaching domain. Chapter 3 recruited coaches from a variety of sports (e.g., swimming, football) and levels (e.g., national, international). In that study coaches responded to scenarios in which they experienced self-threat. Coaches higher in narcissism (compared to those low in narcissism) reported that they would implement more often controlling behaviours toward their athletes, such as yelling, belittlement, or guilt-inducement.

Chapter 3 examined narcissism without differentiating the trait in terms of its adaptive and maladaptive facets as suggested by Barry and Malkin (2010). Adaptive narcissism pertains to viewing oneself as authoritative and self-confident, whereas maladaptive narcissism pertains to feeling entitled, being motivated to gain status over others, and seeking attention or admiration. More relevant to the objectives of the current study, adaptive narcissism is unrelated to social misconduct (e.g., aggression) when controlling for the

"effects" of maladaptive narcissism, whereas maladaptive narcissism is positively associated with social misconduct (Barry, Frick, & Killian, 2003; Barry, Pickard, & Ansel, 2009). As such, it is possible that maladaptive – but not adaptive – narcissism predicts controlling coach behaviours. In addition, narcissism could predict controlling coach behaviours due to its maladaptive facet.

Extending the work of Chapter 3, in this study we tested coaches' effectiveness and normalcy beliefs about controlling interpersonal style as potential mediators of links between narcissism and controlling behaviours. Effectiveness beliefs (Reeve et al., 2014) refer to how successful or impactful an interpersonal style is judged by individuals in positions of authority (e.g., coaches, teachers). Normalcy beliefs refer to how normative (i.e., common, accepted, or expected) an interpersonal style is judged by individuals in positions of authority. Both effectiveness and normalcy beliefs about controlling interpersonal style are positively associated with the use of controlling behaviours by teachers (Reeve et al., 2014). One reason for this is that teachers think controlling behaviours (e.g., offering rewards) promote students' engagement (Boggiano, Barrett, Weiher, McClelland, & Lusk, 1987). Another reason is that teachers — especially those in schools characterized by competition, external evaluation, and strict time constraints — regard controlling behaviours as the norm (Barett & Boggiano, 1988). What is considered as normative may also be considered effective, and therefore teachers who endorse normalcy and effectiveness beliefs about controlling interpersonal style view controlling strategies as acceptable (Reeve et al., 2014). By implication, coaches who consider controlling interpersonal style as effective may also consider it as a norm, and will therefore be likely to utilise controlling behaviours when interacting with their athletes.

In this study we tested whether effectiveness and normalcy beliefs about controlling interpersonal style may represent mechanisms through which narcissism predicts coaches' use

of controlling behaviours. This process has the potential to explain why narcissistic coaches report more frequent engagement in controlling behaviours (Chapter 3). Specifically, narcissistic coaches may hold favourable effectiveness and normalcy beliefs regarding controlling interpersonal style, and this allows them to view controlling behaviours as legitimate and justifiable. Consistent with this contention, higher levels of narcissism (i.e., overall), adaptive, and maladaptive narcissism have been reported to be positively related to normalcy beliefs regarding aggression and bullying (e.g., social exclusion, verbal threat), and these beliefs have been linked to stronger engagement in such behaviours (Blinkhorn, Lyons, & Almond, 2016; Onishi, Kawabata, Kurokawa, & Yoshida, 2011). For example, in a school setting, narcissistic individuals are more likely to be aggressive when perceiving higher levels of classroom norms for aggression (Onishi et al., 2011). Additionally, adaptive and maladaptive narcissists engage in more aggressive and bullying behaviours, respectively, because they believe these behaviours are acceptable and normative (Ang, Tan, & Mansor, 2011; Blinkhorn et al., 2016). A recent meta-analysis of the narcissism and leadership literature further bolsters the relevance of effectiveness beliefs (Grijalva et al., 2015a). The meta-analysis reported positive relations between narcissism (i.e., overall), adaptive, and maladaptive narcissism on the one hand and self-reported leadership effectiveness on the other. Additionally, it showed that individuals higher in narcissism engaged in aggressive behaviours as means of influencing and guiding others. Given the established links between aggressive and bullying behaviours on the one hand and controlling coach behaviours on the other (Bartholomew et al., 2009), we surmise that a similar process operates between narcissism (overall, adaptive, maladaptive) and controlling coach behaviours via effectiveness and normalcy beliefs about controlling interpersonal style, respectively.

As well as aiming to further understanding of antecedents of controlling coach behaviours, we investigated coaches' moral disengagement as a potential outcome of controlling coach behaviours. Moral disengagement is a collective term for eight psychosocial mechanisms (e.g., moral justification, displacement of responsibility, attribution of blame) that allow people to justify or rationalise inappropriate behaviour (Bandura, 2002). These mechanisms facilitate such conduct by reducing or eliminating the emotional consequences that normally follow one's untoward action, and would ordinarily deter it. Importantly, moral disengagement can be used socially to justify or rationalise one's harmful conduct to others (Bandura, 2016). As such, coaches who behave in a controlling manner may engage in moral disengagement to justify or rationalise their controlling behaviours to others. Thus, higher frequency of controlling coach behaviours may be associated with increased moral disengagement. To date, researchers have reported a positive relation between athletes' perceptions of controlling coach behaviours and athlete moral disengagement (e.g., Hodge & Gucciardi, 2015), however, the relation between controlling coach behaviours and coach moral disengagement has not been investigated in the literature.

Hypotheses

Expanding on Chapter 3 that reported a positive link between narcissism and controlling coaching behaviours, we first tested a model (Figure 5.1) in which narcissism predicted controlling behaviours via effectiveness and normalcy beliefs about controlling interpersonal style. We then tested a more elaborated version of that model (Figure 5.2) in which we differentiated between adaptive and maladaptive narcissism. In these two models we hypothesised that narcissism (i.e., overall) and maladaptive – but not adaptive – narcissism would positively and directly predict controlling coach behaviours. We also hypothesised that effectiveness and normalcy beliefs about controlling interpersonal style would positively

predict controlling coach behaviours, and that controlling coach behaviours would positively predict coach moral disengagement. Finally, we hypothesised a positive indirect effect of narcissism (i.e., overall), adaptive, and maladaptive narcissism on controlling coach behaviours, mediated by both effectiveness and normalcy beliefs about controlling interpersonal style.

Method

Participants

Participants were 210 coaches (164 males, 46 females) from a variety of team (e.g., football, rugby) and individual (e.g., swimming, athletics) sports, as well as levels of competition (e.g., national, international, regional). Coaches' ages ranged from 18 to 88 years (M = 35.76, SD = 13.53; 23 participants did not report their age). They had on average 12.99 (SD = 9.59) years of coaching experience and were predominantly White British (83.10%).

Measures

Narcissism. We assessed coach (overall) narcissism with the 40-item, forced-choice Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988). For each item, participants chose between a narcissistic (e.g., "I think I am a special person") and a non-narcissistic (e.g., "I am no better or no worse than most people") statement. Scores range from 0 to 40, with higher scores reflecting higher levels of narcissism. Evidence supporting this scale's construct validity and internal consistency has been provided in previous studies (Wallace & Baumeister, 2002).

Narcissism has been subdivided into two facets, adaptive and maladaptive (Barry & Malkin, 2010). Adaptive narcissism includes authority (e.g., "I like to have authority over others") and self-sufficiency (e.g., "I always know what I am doing") dimensions of the NPI.

Maladaptive narcissism includes exploitativeness (e.g., "I can make anybody believe anything I want them to"), entitlement (e.g., "I expect a great deal from other people"), and exhibitionism (e.g., "I really like to be the center of attention") dimensions of the NPI. The subscales have good construct validity and internal consistency (Barry et al., 2003; Barry et al., 2009).

Controlling coach behaviours. We assessed controlling coach behaviours using the 15-item Controlling Coach Behaviors Scale (CCBS; Bartholomew, Ntoumanis, & Thøgersen-Ntoumani, 2010). Responses ranged from 1 (*strongly disagree*) to 7 (*strongly agree*), with higher scores reflecting more controlling behaviours. For the purposes of this study, we modified the CCBS to refer to coach self-perceptions (e.g., "I try to control what athletes do during their free time;" for a similar approach, see also Stebbings, Taylor, Spray, & Ntoumanis, 2012) rather than athlete perceptions (e.g., "My coach tries to control what I do during my free time"). Evidence supporting this scale's construct validity and internal consistency has been provided in previous studies (e.g., Bartholomew et al., 2011).

Controlling interpersonal style beliefs. We assessed effectiveness and normalcy beliefs regarding controlling interpersonal styles via a questionnaire developed by Reeve et al. (2014). Two items assessed coaches' effectiveness beliefs about controlling interpersonal style (e.g., "How effective would this approach to coaching be in terms of motivating and engaging your athletes?") and two items assessed coaches' normalcy beliefs about controlling interpersonal style (e.g., "Does this approach describe what the other coaches you know and work with do as coaches?"). For effectiveness beliefs, responses ranged from 1 (*extremely ineffective, it would not work at all*) to 7 (*extremely effective, it would certainly work*) for the first item, and from 1 (*no benefit at all*) to 7 (*a great deal of benefit*) for the second item. Additionally, for normalcy beliefs about controlling interpersonal style responses ranged from

1 (*no, not at all*) to 7 ("*yes, very much"*) for the first item, and from 1 (*extremely atypical, uncommon*) to 7 (*extremely typical, common*) for the second item. The scale has good construct validity and internal consistency (Reeve et al., 2014).

Moral disengagement. We assessed moral disengagement using the 8-item Moral Disengagement in Sport Scale-Short (MDSS-Short; Boardley & Kavussanu, 2008). A sample item is: "Shouting at the opponent is okay as long as it does not end in violent conduct." Responses ranged from 1 (*strongly disagree*) to 7 (*strongly agree*). Evidence supporting this scale's construct validity and internal consistency has been provided in previous studies (e.g., Boardley & Kavussanu, 2008).

Procedures

Following approval from the ethics committee of the first author's institution, we recruited coaches via national governing bodies, sport club websites, social media, and personal contacts. We explained the purpose and procedure of the study to coaches via email or in person. We emphasised that their participation was voluntary and all information would be confidential. Prior to completing the 15-min online (collected via the LimeSurvey online application) or hardcopy (collected in person) multi-section questionnaire, we provided coaches with a consent form (online or face-to-face). We received 204 online and 11 hardcopy responses. Out of 215 participants, three were duplicates, one was not based in the United Kingdom, and one requested withdrawal. Thus, the final data set consisted of 210 participants (199 online and 11 hardcopy responses). Upon completion of the survey, participants were able to enter a prize draw. We randomly selected two participants to win a £50 Amazon voucher each as a compensation for their participation. The participants of the online questionnaires had to respond to the each question in order to move to the next one (i.e., forced-choice), disabling the possibility of missing data cases. Together with eleven

hardcopy questionnaires, the study did not contain missing data cases for the measured variables.

Data Analyses

In preliminary analyses, we calculated means, standard deviations, correlations, and tested for internal reliabilities, as well as univariate and multivariate normality (i.e., skewness and kurtosis), using SPSS 22.0 software. We then evaluated the main study hypotheses by conducting path analyses with maximum likelihood (ML) estimation using Mplus 7.2 software (Muthén & Muthén, 1998-2014) that allowed us to test indirect effect via bootstrapping method. We assessed model fit using the χ^2 goodness-of-fit index, root mean-square error of approximation (RMSEA), comparative fit index (CFI), Tucker-Lewis index (TLI), and square root mean residual (SRMR). CFI and TLI values exceeding .95 are indicative of good fit, while SRMR and RMSEA values ≤ .08 and .06, respectively, are considered satisfactory (Hu & Bentler, 1999). We calculated indirect effects using bias-corrected (BC) 95% confidence intervals (CIs) with 5000 resamples, as recommended by Preacher and Hayes (2008). We report the standardised version of specific indirect effects and their BC-CIs (Table 5.2), as well as R^2 values (Figures 5.1, 5.2). A 95% CI not containing zero indicated a statistically significant indirect effect (Preacher & Hayes, 2008). According to Preacher and Kelley (2011), R^2 values are interpreted based on Cohen's (1998) guidelines with effect sizes ranging from small (.01), through medium (.09), to large (.25).

Results

We present descriptive statistics, Cronbach Alpha's (α) coefficients, and inter-correlations for all study variables in Table 5.1. All the variables had high internal consistency and were normally distributed (skewness range: - .238 to .706, kurtosis range: - 1.36 to -.001).

Correlation coefficients were in the expected direction and ranged in effect size from small to large (Cohen, 1988).

Direct Effects

We conducted path analyses to test our models (Figures 5.1 and 5.2). The fit indices for our first *a priori* hypothesized model indicated excellent model fit: $\chi^2(3) = 3.27$, $p = 0.35$, CFI = 1.00, TLI = .99, RMSEA = .02, SRMR = .03. As shown in Figure 5.1, narcissism was a positive predictor of controlling coach behaviours, but not of effectiveness and normalcy beliefs about controlling interpersonal styles. Effectiveness and normalcy beliefs about controlling interpersonal styles were positive predictors of controlling coach behaviours. Finally, controlling coach behaviours was a positive predictor of coach moral disengagement.

The fit indices for our second *a priori* hypothesized model also indicated excellent model fit: $\chi^2(4) = 6.28$, $p = 0.18$, CFI = .98, TLI = .94, RMSEA = .05, SRMR = .03. As shown in Figure 5.2, adaptive narcissism was a positive predictor of effectiveness beliefs, but was unrelated to normalcy beliefs about controlling interpersonal style. In contrast, maladaptive narcissism did not predict either of the beliefs. Additionally, effectiveness and normalcy beliefs about controlling interpersonal style were positive predictors of controlling coach behaviours.

Table 5.1

Descriptive Statistics and Correlations between Study Variables (N = 210)

	Variable	1	2	3	4	5	6	7
1.	Narcissism	**.86**						
2.	Adaptive narcissism	.81**	**.71**					
3.	Maladaptive narcissism	.89**	.53**	**.74**				
4.	Effectiveness beliefs	.12	.18**	.05	**.95**			
5.	Normalcy beliefs	.05	.09	.03	.41**	**.87**		
6.	Controlling coach behaviours	.31*	.21*	.30**	.30**	.30**	**.84**	
7.	Moral disengagement	.18*	.10	.22**	.23**	.16*	.43**	**.82**
	Possible Range	0-40	0-1	0-1	1-7	1-7	1-7	1-7
	M	14.25	.52	.26	4.18	3.85	2.43	2.46
	SD	6.76	.21	.18	2.00	1.47	.89	1.06
	Skewness	.47	.06	.77	-.24	-.19	.35	.45
	Kurtosis	-.21	-.56	-.00	-1.36	-.53	-.62	-.60

Note. Cronbach Alpha's (α) coefficients are in bold along the diagonal. *$p < .05$, **$p < .01$

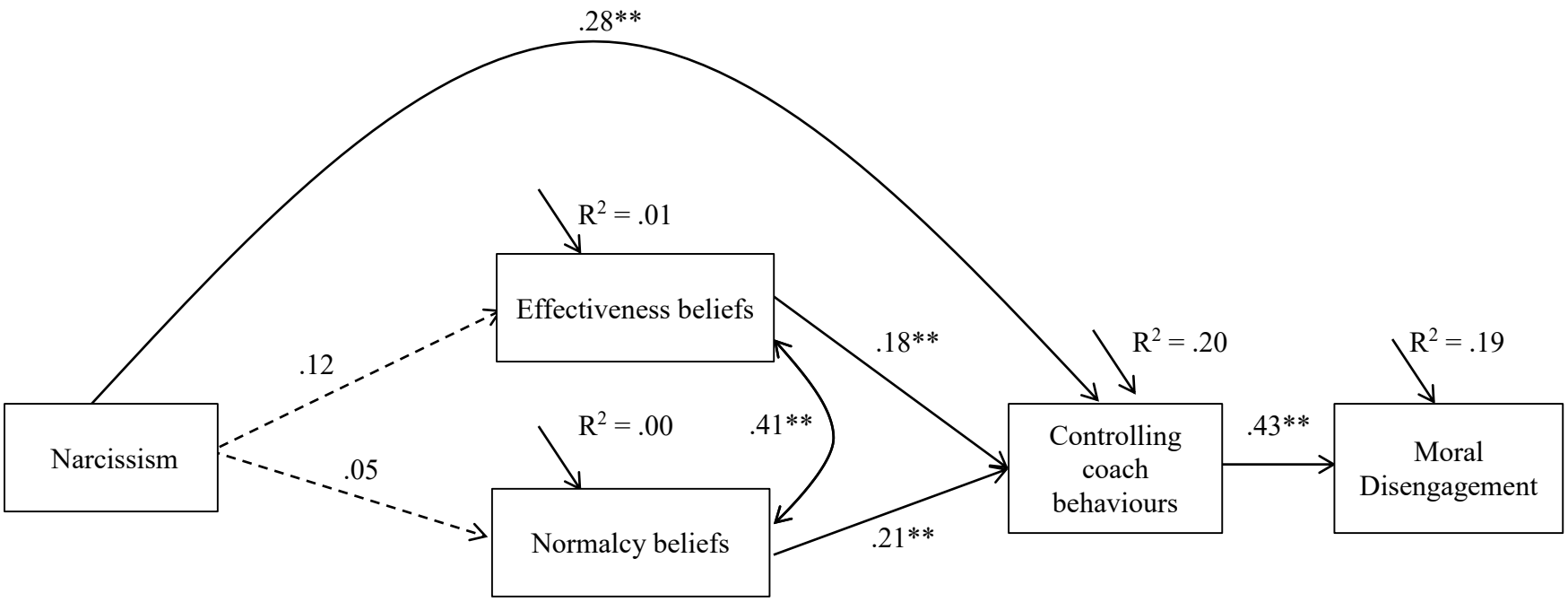

Figure 5.1. Path analysis of a model linking narcissism, effectiveness and normalcy beliefs about controlling interpersonal style, controlling coach behaviours, and moral disengagement. *Note:* We present standardised regression coefficients. Dashed lines represent nonsignificant paths. $^{**}p < .01$

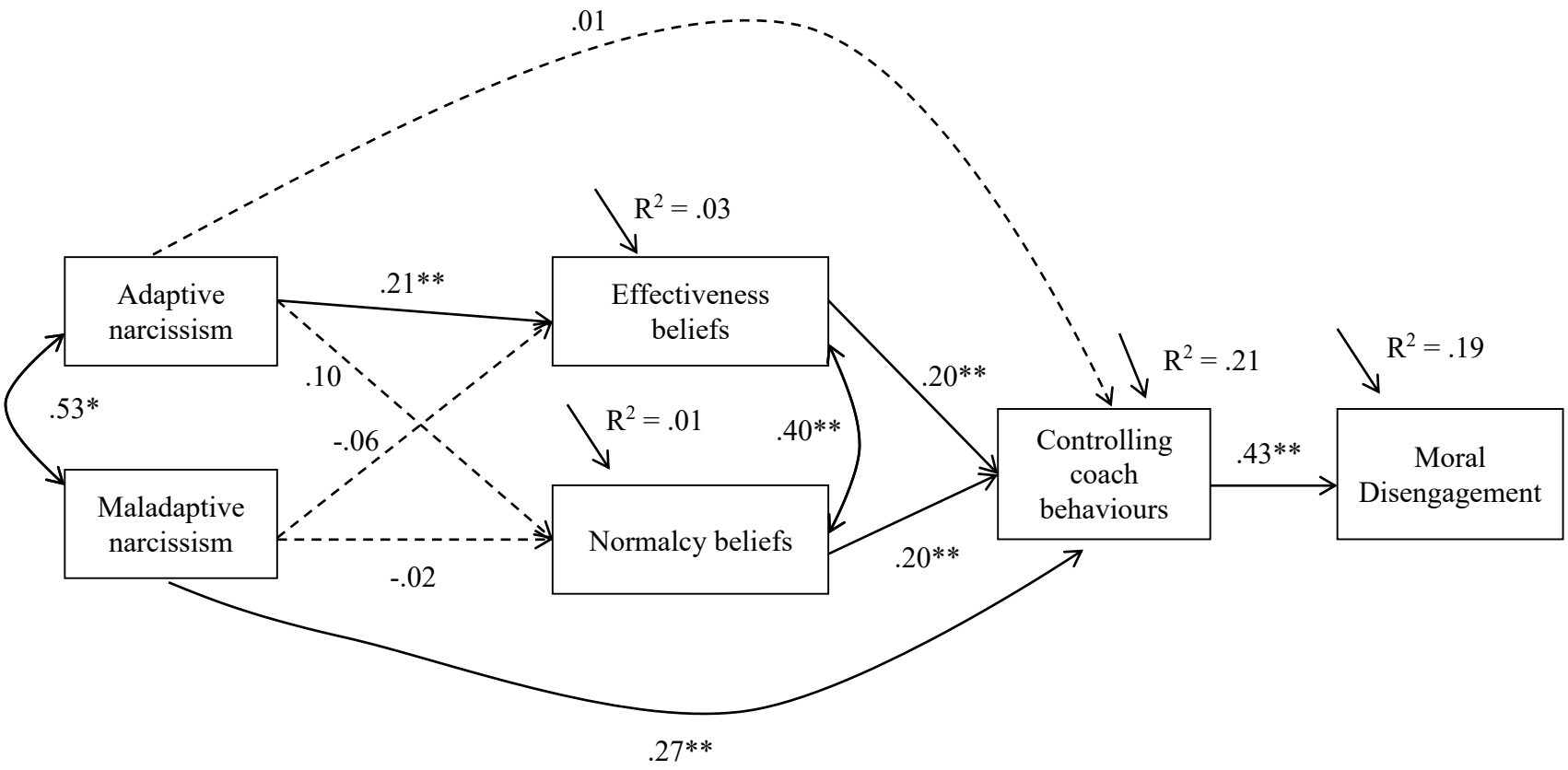

Figure 5.2. Path analysis of a model linking adaptive and maladaptive narcissism, effectiveness and normalcy beliefs about controlling interpersonal style, controlling coach behaviours, and moral disengagement. *Note:* We present standardised regression coefficients. Dashed lines represent nonsignificant paths. $^{**}p < .01$

Indirect Effects

In the first model, the proposed indirect effect between narcissism and controlling behaviours via effectiveness and normalcy beliefs about controlling interpersonal style was not significant (Table 5.2). In the second model, the total indirect effect between adaptive narcissism and controlling coach behaviours via effectiveness and normalcy beliefs about controlling interpersonal style was statistically significant. The indirect effect accounted for 81.58% of the variance explained by the total effect (Preacher & Kelley, 2011). In addition, the specific indirect effect between adaptive narcissism and controlling coach behaviours via effectiveness beliefs about controlling interpersonal style was statistically significant and had a small effect size (R^2 = .03; Figure 5.2). This specific indirect effect explained 56.58% of the variance explained by the total effect (see Table 5.2). No other significant indirect effects were present. Finally, controlling coach behaviours was a positive predictor of coach moral disengagement.[3]

[3] To test for the total and indirect effects of narcissism on moral disengagement, we also specified a model that included the direct path between these two variables. The fit for this model was excellent, $\chi^2(2) = 2.57$, $p = .28$, CFI = 1.00, TLI = .98, RMSEA = .04, SRMR = .02. In the first model, narcissism was a positive predictor of controlling coach behaviours (β = .28, $p < .01$), but not of effectiveness (β = .12, $p = .08$) and normalcy beliefs (β = .05, $p = .51$) about controlling interpersonal styles and moral disengagement (β = .05, $p = .41$). Effectiveness and normalcy beliefs about controlling interpersonal styles were positive predictors of controlling coach behaviours (β = .18, $p < .01$ and β = .21, $p < .01$, respectively). Finally, controlling coach behaviours was a positive predictor of coach moral disengagement (β = .41, $p < .01$). There was a significant indirect effect between narcissism and moral disengagement via controlling coach behaviours (β = .11, [.07, .16]). The fit indices for the second model indicated the following model fit: $\chi^2(2) = 3.46$, $p = .18$, CFI = .99, TLI = .92, RMSEA = .06, SRMR = .02. In the second model, adaptive narcissism was a positive predictor of effectiveness beliefs (β = .21, $p < .01$), but was unrelated to normalcy beliefs about controlling interpersonal style (β = .10, $p = .24$), controlling coach behaviours (β = .01, $p = .85$), and moral disengagement (β = -.06, $p = .44$). In contrast, maladaptive narcissism was a positive predictor of controlling coach behaviours (β = .27, $p < .01$), but did not predict effectiveness (β = -.06, $p = .44$) or normalcy (β = -.02, $p = .85$) beliefs about controlling interpersonal style and moral disengagement (β = .13, $p = .09$). Additionally, effectiveness and normalcy beliefs about controlling interpersonal style were positive predictors of controlling coach behaviours (β = .20, $p < .01$ and β = .20, $p < .01$, respectively). Finally, controlling coach behaviours was a positive predictor of coach moral disengagement (β = .41, $p < .01$). There was a significant indirect effect between adaptive narcissism and controlling coach behaviours via effectiveness beliefs (β = .04, [.01, .08]), and maladaptive narcissism and moral disengagement via controlling coach behaviours (β = .11, [.06, .16]).

Table 5.2

Total and Indirect Effects of Narcissism, Adaptive, and Maladaptive Narcissism on Controlling Behaviours via Effectiveness and Normalcy Beliefs about Controlling Interpersonal Style

Independent variable	Criterion variable	Total indirect effect (95% CI)	Specific indirect effect	
			Effectiveness Beliefs (BC 95% CI)	Normalcy Beliefs (BC 95% CI)
Narcissism	Controlling behaviours	.03 (-.01 - .07)	.02 (-.00 – .05)	.01 (-.02 - .03)
Adaptive narcissism	Controlling behaviours	.06 (.01–.11)*	.04 (.01 – .08)*	.02 (-.01 – .05)
Maladaptive narcissism	Controlling behaviours	-.02 (-.06 -.03)	-.01 (-.04 - .02)	-.00 (-.03 - .02)

Note. *$p < 0.05$. Standardized beta coefficients are presented with biased-corrected 95% confidence intervals.

Discussion

We advanced prior research on coaching from a self-determination perspective by testing models linking antecedents narcissism (i.e., overall), adaptive, and maladaptive narcissism; effectiveness and normalcy beliefs about controlling interpersonal style) and consequences (moral disengagement) of coaches' controlling behaviours. We obtained support for all our direct effect hypotheses such that: (a) narcissism (i.e., overall) and maladaptive – but not adaptive – narcissism positively predicted controlling coach behaviours, (b) effectiveness and normalcy beliefs about controlling interpersonal styles positively predicted controlling coach behaviours, and (c) controlling coach behaviours positively predicted coach moral disengagement. However, only the indirect effect of adaptive narcissism on controlling coach behaviours via effectiveness beliefs about controlling interpersonal style was supported. Specifically, adaptive narcissism positively predicted controlling behaviours through effectiveness beliefs about controlling interpersonal style.

Antecedents of Controlling Coach Behaviours

As expected and also previously found in Chapter 3, coach narcissism was a moderate positive predictor of controlling coaching behaviours. In line with literature on narcissistic leaders (Grijalva et al., 2015a; Schoel et al., 2015), such coaches may pressure their players to the limit in order for the coaches to gain self-enhancement benefits, such as admiration and reflected glory (Mathieu & St-Jean, 2013; Woodman et al., 2011). The finding that higher narcissism in coaches is aligned with more frequent controlling behaviours has now been replicated in two diverse (in terms of sport types, ages, and male-to-female ratio) samples of sport coaches.

As hypothesised, maladaptive – but not adaptive – narcissism predicted controlling coach behaviours. Put otherwise, entitlement, exhibitionism, and exploitativeness – but not

authority or self-sufficiency – are likely to explain the frequency of controlling coach behaviours. For example, coaches who feel entitled to demand a great deal from their athletes, require unconditional praise and admiration from them, and are comfortable in "using" them, will be more likely to pressure hard their athletes to the limit of their performance in order to achieve their own (i.e., coaches') desired ends.

Coaches' effectiveness beliefs about controlling interpersonal style mediated the effect of adaptive narcissism – but not narcissism (i.e., overall) or maladaptive narcissism – on controlling behaviours. Higher levels of adaptive narcissism in coaches were associated with stronger effectiveness beliefs about controlling interpersonal style, which in turn predicted more frequent controlling behaviours. According to Barry and Malkin (2010), adaptive narcissists evaluate situations before taking action to ensure that they are confident of their success. Thus, coaches who show adaptive narcissistic tendencies may need to be convinced that controlling behaviours are effective prior to implementing them with athletes, rather than engaging in them without question. This effect has not been previously examined in the literature. The effect size was small, and therefore the significance of this effect should be interpreted with caution. Further investigation of this relation is needed. In contrast, most of the effect of narcissism (i.e., overall) and maladaptive narcissism on controlling behaviours was direct; effectiveness beliefs about controlling interpersonal style did not have unique predictive ability over and above narcissism. This could be because coaches with maladaptive narcissism feel that they are entitled to use controlling behaviours over their athletes (in a demonstration of power over them), irrespective of whether such behaviours are deemed as effective.

Coaches' normalcy beliefs about controlling interpersonal style did not mediate the effects of narcissism (i.e., overall), adaptive and maladaptive narcissism on controlling coach

behaviours, although those beliefs positively predicted controlling behaviours, in line with findings from the education literature (Reeve et al., 2014). The non-significant indirect effects could be explained through narcissism (i.e., overall), adaptive, and maladaptive aspects of narcissism being linked with the need to be different to others (Raskin & Terry, 1988), making individuals high in these traits less inclined to be influenced by beliefs about norms. For example, coaches who believe they are extraordinary (i.e., adaptive trait) and who like to be the centre of attention (i.e., maladaptive trait) do not like to follow the norm, as it might not have a direct benefit to them.

Controlling Coach Behaviours and Moral Disengagement

As hypothesised, controlling coach behaviours positively predicted coach moral disengagement. In other words, coaches who reported using more controlling coach behaviours were more inclined to morally disengage. According to Bandura (2016), coaches may utilize moral disengagement socially to justify or rationalise their controlling behaviours toward their athletes. For example, coaches who intimidate their athletes (e.g., yell at their athletes) for not performing well in the game because the referee is not doing his/her job well, may allow their athletes to intimidate their opponents for the same reason. This is a novel finding in the literature, as previous literature has only explored the effects of controlling coach behaviours, as perceived by athletes, on moral disengagement in athletes (Hodge & Gucciardi, 2015; Hodge et al., 2013; Hodge & Lonsdale, 2011). Further investigations could expand our model and examine whether coaches' use of moral disengagement could lead to socialization of moral disengagement and fostering of athlete moral disengagement.

Limitations and Future Directions

Our study was based on coach self-reports, which could have been influenced to some degree by socially desirable responses. Follow-up research may incorporate alternative or

additional methods of assessing coach behaviours, such as observational techniques (i.e., blind rating of coach behaviours), to guard against such influences. Also, our study used a survey design and was therefore unsuitable for inferring causality. One way forward would be the implementation of interventions designed to influence coach effectiveness beliefs and ensuing controlling behaviours in samples of coaches with varying levels of narcissism.

Assessment of additional "dark" personality traits as antecedents of controlling coach behaviours would also be useful, such as psychopathy and Machiavellianism. Psychopathy and Machiavellianism share similar maladaptive traits as narcissism (and they form the "dark triad"; Paulhus & Williams, 2002), such as striving for self-promotion, lacking empathy towards others and engaging in aggressive behaviours.

Future work could also investigate the relations between grandiose and vulnerable forms of narcissism and controlling interpersonal style. Our study has investigated the relations between grandiose narcissism (i.e., narcissistic personality trait) and its facets (i.e., adaptive and maladaptive narcissism) with controlling interpersonal style; however, no research has investigated pathological form of narcissism (i.e., vulnerable narcissism) within sport context. Such research on vulnerable narcissism (using the hypersensitivity narcissism scale; Hendin & Cheek, 1997) may provide new insights into narcissism in sport coaches. Finally, future work could explore additional psychological mechanisms that potentially explain the relation between narcissism and controlling coach such as self-esteem. One's self-esteem has been shown to be an important mechanism explaining the link between narcissism and aggressive behaviours in the personality literature (Bushman & Baumeister, 1998).

In summary, this study makes several unique contributions to the literature, in particular in terms of understanding antecedents of a controlling interpersonal style. First, it distinguishes between adaptive and maladaptive facets of grandiose narcissism in sport

coaches. Second, this study replicates and extends on previous findings by showing that narcissism and its maladaptive facet could be antecedents of controlling coaching behaviours. Third, it shows that effectiveness beliefs about controlling coaching mediate the link between adaptive narcissism and controlling coaching. Finally, it shows that controlling coaching behaviours are predictive of coaches' reports of moral disengagement.

GENERAL DISCUSSION

Understanding why coaches may be more likely to adopt certain interpersonal styles could be of a crucial importance to those looking to improve the quality of athletes' sport experiences. To aid understanding on this topic, the overall aim of the current thesis was to explore the effects of narcissism on coach interpersonal styles, as well as potential indirect effects that may explain these effects and outcomes that may stem from these interpersonal styles.

Specifically, the present thesis had four primary objectives. The first was to review the SDT literature on antecedents of controlling and need supportive behaviours. This objective was achieved in Chapter 2, with the review identifying numerous potential antecedents of these behaviours that had yet to be examined. One such antecedent of particular relevance to sport coaches – narcissism – was then investigated in relation to the two interpersonal styles in Chapters 3, 4, and 5, and in doing so achieved the second thesis objective. The third objective was to explore possible indirect effects between narcissism and coach interpersonal styles that may also act as explanatory mechanisms for direct effects between narcissism and coach interpersonal styles. This was achieved in part by investigating indirect effects between coach narcissism and controlling behaviours via empathic concern and dominance in Chapters 3 and 4, and between narcissism (including distinction between adaptive and maladaptive facets) and controlling behaviours via effectiveness and normalcy beliefs about controlling interpersonal style in Chapter 5. The third objective was also achieved by examining the indirect effect between narcissism and autonomy-supportive behaviours via empathic concern in Chapter 3. The final objective was to investigate outcomes of coach interpersonal styles related to moral functioning in coaches and athletes. This was achieved by examining athlete need frustration and attitudes toward doping as

outcomes of controlling coach behaviours in Chapter 4, and coach moral disengagement as an outcome of controlling behaviours in Chapter 5.

Figure 6.1 represents the full process examined in the current thesis from narcissism through mediators and coach interpersonal style to morality-related outcomes. It was found that coaches who scored higher in narcissism were more likely to utilise controlling behaviours with their athletes (Chapter 3, 4, and 5). Additionally, when distinguishing between adaptive and maladaptive facets of grandiose narcissism, the current thesis revealed the maladaptive facet was related to controlling behaviours (Chapter 5). It can therefore be concluded that it may be the maladaptive facet of narcissistic personality that could be a potential trigger for controlling coach behaviours (Barry & Malkin, 2010).

In the current studies, the relation between narcissism and controlling behaviours was tested via multiple mediators such as empathic concern, dominance, and beliefs about controlling interpersonal style. Empathic concern was found to be a mediator of the effect between narcissism and controlling behaviours in one of the chapters (i.e., Chapter 3), but this was not replicated in the subsequent chapter (i.e., Chapter 4). Next, empathic concern was found to be a mediator of the effect between narcissism and autonomy-supportive behaviours in one of the chapters (i.e., Chapter 3). Finally, effectiveness beliefs about controlling interpersonal style were found to mediate the association between adaptive narcissism and controlling behaviours in the last empirical chapter (i.e., Chapter 5). It can be concluded that some of these mediators may act as potential underlying mechanisms for the relations between narcissism and controlling and autonomy-supportive behaviours.

Finally, the current thesis tested the morality-related outcomes of controlling behaviours such as athlete need frustration, athlete doping attitudes, and coach moral disengagement. These outcomes were positively associated with controlling behaviours.

Specifically, controlling coach behaviours may encourage athletes to experience need frustration and develop positive attitudes toward doping (Chapter 4), and coaches to morally disengage (Chapter 5). All the findings are explained in further detail in the following sections.

The results of the current thesis extended the body of research testing aspects of Mageau and Vallerand's (2003) coach-athlete relationship model. The primary extension made to this body of research was the investigation of coach narcissism as an antecedent of controlling and autonomy-supportive interpersonal styles. In addition, the current work also contributes to this literature base by examining potential psychological mechanisms and indirect effects that may explain relations between narcissism and coaches' interpersonal styles. Finally, this research also added to current knowledge by exploring novel coach and athlete outcomes of coaches' interpersonal styles. In the paragraphs that follow, the significant theoretical and applied implications resulting from this thesis are discussed. Following this, key limitations and future directions stemming from this work are presented and discussed.

Antecedents of Coach Interpersonal Styles

To achieve our first objective, antecedents of two coach interpersonal styles (i.e., controlling and need supportive) were reviewed and synthesised (Chapter 2). Based on Mageau and Vallerand's (2003) model, three categories of antecedent variables thought to influence the behaviours of individuals in positions of authority from the educational, parental, sport, work and health domains were reviewed. These three categories were contextual factors (e.g., pressure from authorities, evaluations and time constraints; Pelletier, Seguin-Levesque, & Legault, 2002), perceptions of others' behaviours and motivation (e.g., self-determined and non-self-determined motivation, Taylor & Ntoumanis, 2007) and

personal factors (e.g., beliefs about interpersonal style, causality orientations; Deci & Ryan, 1985; Reeve et al, 2014). In terms of the sport domain, the review established that coaches may engage in more controlling and less need supportive behaviours when they experience pressures internally (e.g., contingent self-esteem) or from the external environment (e.g., club administrators). However, there was a dearth of literature informing conclusions regarding how personality traits/dispositional factors may influence coaches' interpersonal styles. Personality can play an important role in determining behaviour (Mount, Ilies, & Johnson, 2006) and research investigating the potential effects of personality on coach interpersonal style was therefore needed to further our understanding of the factors that may influence coach behaviour.

Review findings relating to personality influences of interpersonal style in non-sport contexts supported the possible influence of personality variables on coach interpersonal style. For instance, in the education domain causality (i.e., controlled and autonomous; Deci & Ryan, 1985b) and self-regulatory (i.e., locomotion and assessment orientations; Pierro, Presaghi, Higgins, & Kruglanski, 2009) orientations have been linked with controlling and autonomy-supportive behaviours. For example, an orientation focused on comparing oneself with others and only engaging in situations that were previously critically evaluated (i.e., assessment orientation) was linked with greater frequency of controlling behaviours. These findings suggest that personality traits could also play an influential role in determining coach interpersonal style. It may be plausible to suggest that one such personality trait – i.e., narcissism – is important for controlling behaviours. For example, similarly to individuals with assessment orientation, narcissistic individuals like to compare themselves with others and engage in situations where they gain personal benefit (Mathieu & St-Jean, 2013). As

such, narcissism could be linked with controlling behaviours. The current thesis explored narcissism in relation to controlling and autonomy-supportive behaviours in sport coaches.

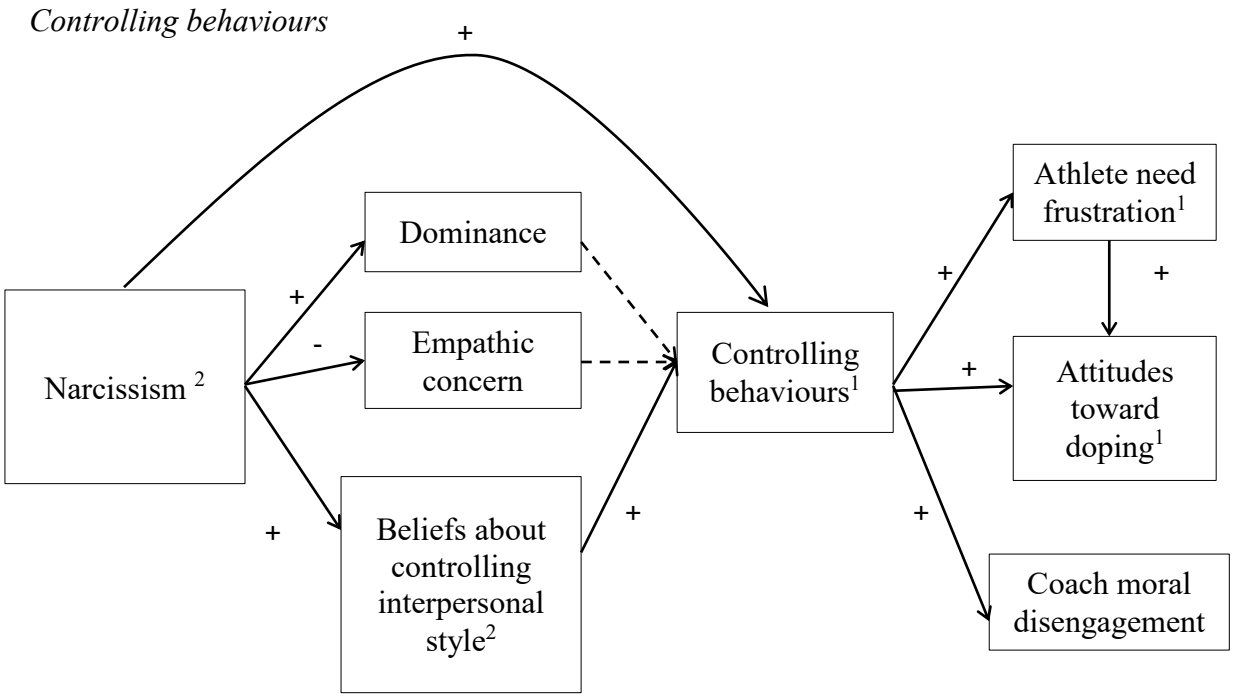

Figure 6.1. Thesis conceptual model outlining the supported hypothesised relations between the variables examined in the current thesis. *Note.* Dashed lines represent refuted hypothesised relations. [1]The relation between controlling behaviours-need frustration-attitudes toward doping was significant at the within-level, but not between-level. [2]Maladaptive narcissism was significantly related to controlling behaviours, not adaptive narcissism. Only adaptive narcissism was significantly related to controlling behaviours via effectiveness beliefs about controlling interpersonal style.

Narcissism and Coach Interpersonal Styles

To achieve the second thesis objective, narcissism was explored as a predictor of controlling and autonomy-supportive coach behaviours. Grandiose narcissism (referred to as narcissism or overall narcissism throughout chapters) is a well-researched personality trait in the leadership literature (Rosenthal & Pittinsky, 2006). According to Barry and Malkin (2010), grandiose narcissism can be sub-divided into maladaptive (i.e., exploitativeness, exhibitionism and entitlement) and adaptive (i.e., authority and self-sufficiency) facets. Given that sport coaches play a leading role in creating athletes' sport experiences, narcissism (e.g., overall, adaptive, and maladaptive) was considered to be of particular potential relevance to coach interpersonal styles. Characteristics (e.g., not tolerating criticism, taking advantage of others) and behaviours (e.g., aggression, intimidation; Bushman & Baumeister, 1998; Stucke, 2003) of narcissistic leaders often reflect characteristics of coaches who engage in controlling behaviours (Bartholomew, Ntoumanis, & Thøgersen-Ntoumani, 2009). Research studies comprised in Chapters 3, 4, and 5 represent the first empirical studies to investigate narcissism as an antecedent of coach interpersonal styles. First, Chapter 3 explored whether narcissism predicted self-reported controlling and autonomy-supportive behaviours. Then, Chapter 4 investigated whether narcissism predicted athletes' perceptions of controlling coach behaviours. Finally, Chapter 5 examined whether narcissism (i.e., overall), adaptive, and maladaptive narcissism predicted controlling behaviours. In the following paragraphs the findings from these three chapters have been integrated and discussed collectively.

As hypothesised, Chapters 3, 4 and 5 indicated that narcissism was positively related to frequency of controlling behaviours in sport coaches (Figure 6.1). Chapters 3 and 5 included UK sport coaches representing a variety of coaching levels (e.g., national, international) and sports (e.g., football, swimming). In Chapter 3, controlling behaviours were

assessed via coach self-perceptions using scenarios that described common coaching situations that induced narcissistic characteristics in coaches. It was found that coaches who reported higher levels of narcissism reported using controlling strategies such as guilt-inducing statements or punishment more frequently when their narcissism was threatened, compared to those reporting lower levels of narcissism. In Chapter 5, controlling coach behaviours were assessed via coach self-reports and it was found that high levels of narcissism (i.e., overall) and maladaptive – but not adaptive – narcissism in coaches were aligned with frequent use of controlling behaviours. Chapter 4 included UK sport coaches and athletes from variety of levels (e.g., national, international) and sports (e.g., football, swimming). It was found that coach narcissism was positively associated with athletes' perceptions of controlling coach behaviours at the between-level of the multilevel model.

The findings of the current thesis were consistent across three empirical studies Chapters 3, 4, and 5). Coaches who were higher in narcissism, self-reported or were perceived as more controlling by the athletes they coached, compared to coaches who were lower in narcissism. In an effort to establish authority and superiority over their athletes (Morf & Rhodewalt, 2001), and gain personal benefit and opportunities for glory (Mathieu & St-Jean, 2013), coaches higher in narcissism may criticise and intimidate their athletes when their traits are being questioned. For example, when coaches higher in narcissism whose athletes unintentionally violate the rules of conduct established by the coach feel their authority and superiority have been threatened, they may utilise controlling behaviours to punish their athletes for violating the rule and questioning their authority and superiority. Identifying the same effect across diverging samples (i.e., different male to female ratios, contrasting ages, different sport types represented) and using a range of assessment strategies highlights the robust nature of this finding in the UK coach and athlete populations. These findings suggest

that narcissism may be an important factor when determining controlling behaviours in sport coaches and, thus, may provide new insights on how personality traits influence coaches' engagement in controlling behaviours. These findings also make an empirical contribution to Mageau and Vallerand's (2003) coach-athlete relationship model by identifying narcissism as a specific antecedent for inclusion in the personality trait antecedent dimension of the model.

In line with the Barry and Malkin (2010) distinction of grandiose narcissism, maladaptive narcissism (i.e., exhibitionism, exploitativeness, entitlement) – not adaptive – was positively associated with the use of controlling behaviours in coaches in Chapter 5 (Figure 6.1). The literature argues that narcissism may be linked to controlling coach behaviours because of its maladaptive – not adaptive – facets (Barry, Frick, & Killian, 2003; Barry, Pickard, & Ansel, 2009). In other words, it may be that entitlement, exhibitionism, and exploitativeness characteristics of coach narcissism that are important for controlling behaviours, rather than authority and self-sufficiency. For example, coaches who expect great deal from their athletes (i.e., entitlement characteristic) may be very likely to engage in controlling behaviours (e.g., pressure athletes to perform at their best). Although this was examined in Chapter 5 only, it is to suggest that maladaptive components of narcissism might have led to coaches' report of increased frequency of controlling behaviours found in Chapters 3 and 4 as well. Future research should further examine this distinction between maladaptive and adaptive narcissism in relation to controlling behaviours in sport coaches.

Along with controlling coach behaviours, Chapter 3 investigated the relation between coach narcissism and autonomy-supportive behaviours. The current thesis was primarily interested in the relation between narcissism and maladaptive behaviours (i.e., controlling behaviours). However, for exploratory reasons one of the chapters examined the relation between narcissism and adaptive behaviours (i.e., autonomy-supportive behaviours). Out of

the three need supportive behaviours represented in SDT (i.e., autonomy support, structure, interpersonal involvement; Taylor & Ntoumanis, 2007), autonomy-supportive behaviours have been studied in a relation with narcissism because narcissism may affect the degree to which one can offer autonomy support. For example, individuals higher in narcissism may be inconsiderate of others, and thus, fail to provide them with support and positive feedback (Lannin, Guyll, Krizan, Madon, & Cornish, 2014). In terms of the other two adaptive interpersonal styles (i.e., interpersonal involvement and structure), for similar reasons to those proposed for autonomy support, interpersonal involvement and structure may also be linked with narcissism (e.g., Campbell, Foster, & Finkel, 2002; Horowitz & Arthur, 1988; Morf & Rhodewalt, 2001). However, for reasons of parsimony the current thesis focused only on examining the relation between narcissism and autonomy-supportive behaviours. As such, the relation between narcissism and other two adaptive interpersonal styles (i.e., interpersonal involvement and structure) in sport coaches would be an interesting area for future researchers to explore.

Chapter 3 hypothesised that narcissism would be negatively related to autonomy-supportive behaviours due to narcissistic individuals being self-centred and inconsiderate of others which may discourage them from adopting supportive behaviours. Contrary to our hypothesis, coach narcissism was not directly related to autonomy-supportive behaviours (Figure 6.1). This unexpected finding may be because coach narcissism may only influence autonomy-supportive coach behaviours in specific circumstances. Specifically, the effect of narcissism on autonomy-supportive behaviours may be moderated by opportunity for self-enhancement (Wallace & Baumeister, 2002). For example, narcissistic individuals may engage in behaviours that promote empowerment through provision of choice (i.e., autonomy-supportive) in situations that create opportunities for their self-enhancement (e.g., great public

performance witnessed by individuals whose opinions are valued in the sport event that is considered a special achievement). Contrarily, they may be hesitant to engage in these behaviours when situations lack such self-enhancement opportunities. Omitting to assess self-enhancement moderator may explain null effects. Future research should focus on potential moderators of the relation between narcissism and coach autonomy support.

In summary, the second objective of the current thesis was achieved by testing the relations between narcissism and controlling and autonomy-supportive behaviours. Overall, coaches higher in narcissism (i.e., overall) and maladaptive – not adaptive – narcissism engaged in controlling behaviours more frequently than those lower in these forms of narcissism. Additionally, narcissism was not linked with autonomy-supportive behaviours. These findings have identified narcissism as an important potential antecedent of controlling coach behaviours in the sport-coaching population.

Mechanisms Potentially Explaining the Relations between Narcissism and Coach Interpersonal Styles

To address our third objective, the current thesis investigated a number of possible indirect effects between narcissism and interpersonal style. Specifically, Chapter 3 explored indirect effects between narcissism and coach-reported controlling behaviour via empathic concern and dominance, and between narcissism and autonomy-supportive behaviours via empathic concern. Chapter 4 then investigated the indirect effect of narcissism on athlete-reported controlling behaviours via empathic concern and dominance. Finally, Chapter 5 examined the indirect effect of narcissism (including distinction between its adaptive and maladaptive facets) on coach-reported controlling behaviours via effectiveness and normalcy beliefs about controlling interpersonal style. The coming paragraphs reflect upon and discuss the findings from these chapters.

Empathic concern. One mechanism with the potential to explain the effects of narcissism on controlling and autonomy-supportive coach behaviours is empathic concern. Based on evidence that narcissistic individuals lack empathic concern (Trumpeter, Watson, O'Leary, & Washington, 2008), positive and negative effects of narcissism on controlling and autonomy-supportive behaviours via empathic concern were hypothesised (Eisenberg & Miller, 1987, Hepper, Hart, & Sedikides, 2014b). Supporting the hypothesis, Chapter 3 revealed that coaches who reported higher levels of narcissism experienced lower levels of empathic concern and reported more frequent engagement in controlling behaviours and less frequent engagement in autonomy-supportive behaviours, compared to coaches who reported lower levels of narcissism. Contrary to these findings, in Chapter 4, the effect of coach narcissism on athletes' perceptions of controlling behaviours was not mediated by empathic concern. Specifically, narcissism did not predict empathic concern, and empathic concern did not predict athletes' perceptions of controlling behaviours (Figure 6.1).

Contrary to literature findings (Hepper, Hart, & Sedikides, 2014b), the explicit assessment of empathic concern in the current thesis may have failed to detect an implicit effect believed to explain why coaches high in narcissism lack ability to experience others' feelings. These mixed findings may be due to multiple reasons. First, the inconsistency of the finding between narcissism and empathic concern might have been due to sample size. Low number of coaches in Chapter 4 ($N = 59$) may have led to sample-specific null finding. Furthermore, the inconsistency of the finding between empathic concern and controlling coach behaviours could be due to difference in the self-reported (Chapter 3) vs athlete-reported (Chapter 4) measures of controlling behaviours. Relevant research has revealed a weak relation between self-reported coach interpersonal style and athletes' perceptions of their coach's interpersonal style (Smoll, Smith, & Cumming, 2007). Coaches may be likely to

evaluate themselves more favourably than their athletes do (Kavussanu, Boardley, Jutkiewicz, Vincent, & Ring, 2008; Short & Short, 2004). As such, in Chapter 3, coaches higher in empathic concern may have rated themselves as less controlling, compared to Chapter 4 where athletes rated those coaches as more controlling. However, comparisons between two studies were not possible because of the different measures of controlling behaviours used across studies.

In addition, Chapter 3 revealed the link between narcissism and autonomy-supportive behaviours via empathic concern. Specifically, coaches who reported higher levels of narcissism reported lower levels of empathic concern and, as a result, were less likely to report engaging in autonomy-supportive behaviours, compared to coaches who reported lower levels of narcissism (Figure 6.1). Empathic concern is an important correlate of adaptive behaviours. As such, individuals with higher levels of empathic concern are more likely to engage in adaptive conduct such as helping others (Eisenberg & Miller, 1987). Therefore, coaches higher in narcissism may have been less likely to engage in autonomy-supportive behaviours because their reduced levels of empathic concern meant they were less appreciative of the potential beneficial outcomes of such behaviours for their athletes.

In summary, the current empirical studies have revealed mixed findings when examining the relation between narcissism and coach interpersonal styles via empathic concern. One of the studies (i.e., Chapter 3) revealed a positive link between coach-reported narcissism and controlling coach behaviours and a negative link between coach-reported narcissism and autonomy-supportive both via reduced empathic concern. In contrast, the subsequent study (i.e., Chapter 4) found no relation between coach narcissism and athletes' perceptions of controlling behaviours via empathic concern. Future research should aim to

clarify these mixed findings by replicating Chapter 4 using self-reported measures of coach behaviours.

Dominance. Another psychological mechanism with the potential to explain the effect of narcissism on controlling coach behaviours is dominance. Narcissistic leaders are dominant in their interactions, and thus, are more likely pressure and intimidate others, ultimately engaging in maladaptive behaviours (Ojanen, Findley, & Fuller, 2012). It was hypothesised that dominance would mediate a positive relation between narcissism and controlling behaviours. Contrary to the thesis hypothesis, in Chapters 3 and 4, the positive effect of narcissism on controlling coach behaviours (either self- or athlete-reported) was not mediated by dominance (Figure 6.1). The findings of both chapters suggest that dominance is a consistent correlate of narcissism in sport coaches, supporting existing literature from other domains linking these variables (Raskin, Novacek, & Hogan, 1991). However, dominance may be captured by narcissism and, as such, does not predict controlling behaviours. Future research should potentially test other sub-components of power such as authority and status as mediators between narcissism and controlling coach behaviours.

Beliefs about controlling interpersonal style. In the earlier studies (i.e., Chapter 3, Chapter 4) coaches higher in narcissism may have been more likely to engage in controlling behaviours compared to those lower in narcissism because they held stronger beliefs that these behaviours were effective and/or normative. In Chapter 5 effectiveness and normalcy beliefs about controlling interpersonal styles were investigated as potential mediators of effects of narcissism (i.e., overall), adaptive and maladaptive narcissism on controlling coach behaviours. Of the six potential meditated effects, only an indirect effect of adaptive narcissism on controlling behaviours via coaches' effectiveness beliefs about controlling interpersonal styles proved significant (Figure 6.1). Specifically, high levels of adaptive

narcissism in coaches predicted strong effectiveness beliefs about controlling interpersonal styles, which in turn predicted more frequent controlling coach behaviours. This finding potentially suggests individuals with adaptive narcissistic traits may need to analyse a situation and perceive a particular behaviour as effective before utilising it, to establish confidence about its potential benefit in the situation (Barry & Malkin, 2010). As such, coaches high in adaptive narcissism may need to believe controlling behaviours are effective prior to engaging in them.

Contrary to the thesis hypotheses, effects of narcissism (i.e., overall) and maladaptive narcissism on controlling behaviours were not mediated by effectiveness beliefs about controlling interpersonal style. According to the literature on narcissistic leaders (Schoel et al., 2015), narcissistic individuals may use controlling behaviours (e.g., belittlement) to demonstrate their power over others, irrespective of the effectiveness of the outcome. As such, coaches high in narcissism and its maladaptive facets may use controlling behaviours to show authority and superiority over their athletes, regardless of whether those behaviours are deemed by them to be effective.

Similarly, indirect effects of narcissism (i.e., overall), adaptive and maladaptive narcissism on controlling coach behaviours via normalcy beliefs about controlling interpersonal style were not evident. Although – consistent with research in education (Reeve et al., 2014) – beliefs about norms positively predicted controlling behaviours, neither narcissism (i.e., overall), adaptive nor maladaptive narcissism predicted such beliefs. This could be because narcissistic individuals have been shown to be insensitive to norms because they believe norms are generally not applicable to them (Godkin & Allcorn, 2009). Thus, normalcy beliefs appear not be important in explaining the effects of narcissism on interpersonal style.

In summary, effectiveness – but not normalcy– beliefs about controlling interpersonal styles may be important in explaining the relation between certain forms of narcissism (i.e., adaptive narcissism) and controlling coach behaviours. Coaches high in adaptive narcissism may engage in controlling behaviours because they believe it is an effective interpersonal style. These findings offer novel contributions to the literature by extending the literature on beliefs about controlling interpersonal styles – previously based solely on teachers (Reeve et al., 2014) – to also include research on sport coaches.

Outcomes of Coach Interpersonal Styles

To achieve the fourth objective, morality-related coach and athlete outcomes of controlling coach behaviours were explored. These were athlete need frustration and attitudes toward doping (i.e., Chapter 4) and coach moral disengagement (i.e., Chapter 5). Links between need frustration and doping-related variables at both levels, as well as, coach behaviours and coach moral disengagement have not been investigated previously. Distinguishing between athlete reports of need frustration and attitudes toward doping (within-level), and athletes aggregated views on these variables within the team (between-level) is important as athletes are nested within teams (i.e., coaches) and individuals in the group are more likely to share similar attitudes and behaviours compared to individuals in different groups (Heck & Thomas, 2015). The key findings from these studies are integrated and discussed in the following paragraphs.

Supporting the thesis hypotheses, athlete need frustration and athlete attitudes toward doping at the within-level, athlete need frustration at the between-level, and coach moral disengagement were all linked with more frequent controlling coach behaviours (Figure 6.1). In Chapter 4, it was found that athletes who perceived their coach to be controlling are more likely to develop positive attitudes toward doping as a possible result of frustration of their

needs at the within-level (Figure 6.1). Extending on Hodge, Hargreaves, Gerrard, and Lonsdale (2013) who examined the relation between athletes' perceptions of controlling behaviours and attitudes towards doping via self-determined motivation, the findings at the within-level suggested that athletes who perceive coaches as putting pressure on them to perform well, may develop more favourable attitudes toward doping because their athletes' feelings of their basic psychological needs are being undermined. For example, athletes who feel their need for competence is frustrated may develop more favourable attitudes towards doping because they start to consider using them to enhance their performance as a means of trying to satisfy their need for competence. Similarly, they may feel the improved performances they would gain from doping would lead to greater acceptance within their training group, therefore helping to satisfy the need for relatedness. Based on this interpretation, future researchers could examine whether doping attitudes are linked with satisfaction of the three psychological needs individually.

Additionally, Chapter 4 revealed that coach narcissism was positively related to athlete need frustration through athletes' perceptions of controlling behaviours at the between-level. It was found that athletes' perceptions of controlling behaviours were positively related to athlete need frustration, however need frustration was not associated with attitudes toward doping at the between-level. Findings at the between-level suggested when narcissistic coaches exhibit controlling characteristics such as punishing athletes or imposing deadlines, athletes were generally more likely to feel oppressed, inadequate, or rejected. However, in contrast to the effect at the athlete level, when teams perceived a collective need frustration this was not linked with a group-level effect on their attitudes toward doping. These differences may have been because athletes view doping as a private behaviour (Petróczi, 2013a) and, as such, are not willing to share their views on doping with others, preventing the

formation of group-level doping attitudes. Group-level doping attitudes has been a relatively new construct in the literature (Mallia et al., 2016). Mallia et al. (2016) found that it is the team-based moral disengagement that may have an influence on athletes' decision making and their intentions to develop positive attitudes toward doping in the future. Specifically, athletes in the team may morally justify doping use when it is beneficial to their team's interest. Future studies should extend on the current findings by investigating the role of team moral disengagement in relation to group-level doping attitudes.

The positive relation between athletes' perceptions of controlling behaviours and athlete need frustration at both levels (i.e., within- and between-levels) emphasises the importance of employing multilevel analyses with nested data. These findings suggest that controlling behaviours of a coach may be perceived similarly by all athletes coached by that coach, potentially resulting in a general frustration of basic psychological needs of all athletes on that team. Additionally, interacting with players on a one-to-one basis, may lead to unique effects of controlling coach behaviours on need frustration of each athlete.

Apart from athlete outcomes of controlling coach behaviours, coach outcomes were also explored. In Chapter 5, a positive relation between coach moral disengagement and controlling coach behaviours was revealed (Figure 6.1). It was found that coaches who reported more frequent use of controlling behaviours had higher levels of moral disengagement. Supporting Bandura's (2016) theory, controlling coaches may morally disengage as a way to socially rationalise their controlling behaviours toward their athletes. For example, a coach who punishes a player who has made a mistake by verbally berating him in front of the team may morally justify (i.e., one of the eight mechanisms of moral disengagement) this behaviour by saying he did it for the benefit of the team. This finding may provide a potential mechanism link to a related finding from the extant literature.

Specifically, research has identified a positive association between controlling coach behaviours and athlete moral disengagement (Hodge & Gucciardi, 2015; Hodge et al., 2013; Hodge & Lonsdale, 2011). If controlling coaches do have higher levels of moral disengagement – as supported by the current findings – athletes may socially learn to morally disengage from such coaches. Such an effect could explain the positive association between controlling coaching and athlete moral disengagement found in the work of Hodge and colleagues.

In summary, the fourth objective of this thesis was to examine the relation between controlling coach behaviours and detrimental outcomes for both athletes and coaches. These findings offered novel contributions to the literature on sport coaching, because they revealed for the first time (a) a positive predictive effect of athletes' perceptions of controlling behaviours on attitudes toward doping via need frustration; (b) a positive predictive effect of athletes' perceptions of controlling behaviours on need frustration at the within- and between-level; and (c) a positive predictive effect of coach controlling behaviours on coach moral disengagement.

Limitations and Future Directions

As with any research, the studies that constitute this thesis have a number of limitations that warrant further examination and offer further future directions. First, the limitations of the current thesis include use of self-report data throughout the studies. Although SDT proposes that the affective attitudes and behaviours of individuals should be based on the subjective perception and explanation of contextual factors (Deci & Ryan, 1985a), self-reported data is known to be sensitive to socially desirable responding (Gucciardi, Jalleh, & Donovan, 2010). The findings of the current thesis were based on self-reported subjective perceptions of coach personality, coach and athlete perceptions of their

behaviours and maladaptive outcomes and, as such, were potentially sensitive to socially desirable responses. This method may have provided lower means of certain variables such as narcissism or attitudes toward doping as coaches and athletes were evaluating themselves more favourably. Future research should consider alternative methods of assessing thesis variables such as using implicit measures. Implicit measures assess spontaneous, unconscious reactions possibly providing more robust measurements of variables compared to self-report measures that assess responses made under conscious control (Perugini, Richetin, & Zogmesiter, 2010). As such, implicit measures are considered to be less susceptible to the influence of social desirability. For example, measuring attitudes toward doping or need frustration via implicit measures may provide more accurate and realistic measurements of these variables.

Additional limitation includes gender imbalance in sampling. A greater number of male, compared to female participants were recruited across empirical studies of the current thesis. Given that number of variables tested across studies (e.g., narcissism, attitudes toward doping, Grijalva et al., 2015b; Sas-Nowosielski & Swiatkowska, 2008) reported differences in the results based on gender, omitting to recruit equal number of males and females might have influenced the results. For example, literature has revealed that males are generally more narcissistic than females (Grijalva et al., 2015b), or that female athletes are more likely to develop favourable attitudes toward doping compared to males (Sas-Nowosielski & Swiatkowska, 2008). Future research should aim for more balanced sample based on gender.

Finally, a consistent limitation across all three empirical studies was the use of cross-sectional research designs. The findings of the current thesis were all measured at one point in time, and as such, do not provide a clear understanding of the directional relation among tested variables. Researchers could investigate the temporal relations between study variables

providing a more complete understanding of the directional relation among the tested variables through use of longitudinal designs (Stenling, Ivarsson, & Lindwall, 2016). Future studies could also develop and test interventions (e.g., to enhance empathic concern; Hatcher et al., 1994) aimed at reducing the influence of narcissism on controlling behaviours.

There are numerous future directions arising for the current thesis that are important for this area of research. The current thesis has mainly focused on the negative aspects of narcissism. Narcissism has been identified as an important antecedent of maladaptive behaviours in the current thesis, however narcissism may also be effective. According to the narcissistic literature, narcissistic individuals may exhibit positive and negative leadership characteristics (Rosenthal & Pittinsky, 2006). Apart from the negative characteristics explored in the current thesis, narcissistic individuals may be liked by others (e.g., entertaining and socially extraverted) and seen as effective leaders, but only in the short-term (Paulhus & John, 1998; Paulhus, 1988). In the long-term (e.g., after seven weeks), however, they begin to exhibit their maladaptive behaviours and become unlikable that results in individuals perceiving them as ineffective (Paulhus, 1998). Future research should investigate whether athletes' perceptions of coach effectiveness change over time with coaches higher in narcissism, by taking time spent with the coach into consideration.

Additionally, the current thesis distinguished between adaptive and maladaptive facets of grandiose narcissism based on the Barry and Malkin's (2010) distinction of the Narcissistic Personality Inventory (Raskin & Terry, 1988). Recently, researchers have developed individual measures of concepts that overlap with adaptive and maladaptive narcissism, called narcissism admiration (e.g., seeking uniqueness, being self-assured and using expressive behaviours) and narcissism rivalry (e.g., seeking supremacy, being hostile and insensitive), respectively (Back, Küfner, Dufner, Gerlach &Rauthmann, 2013), that may potentially

provide a better evidence for this distinction. These concepts are positively related to each other, and represent the "bright" (e.g., admiration) and "dark" (e.g., rivalry) sides of narcissism, just as adaptive and maladaptive narcissism, respectively (Back et al., 2013). Future research should use these new constructs to explore the distinction between "bright" and "dark" sides of narcissism.

Moreover, the current thesis explored three potential factors (i.e., empathic concern, dominance, and effectiveness and normalcy beliefs about interpersonal style) that can underpin the relation between narcissism and coach behaviours and revealed mixed findings. Specifically, the relation between narcissism and controlling behaviours via empathic concern revealed mixed findings; dominance and normalcy beliefs were not significant mediators of a given relation; and only the indirect effect of adaptive narcissism on controlling behaviours via effectiveness beliefs was significant. In an effort to further understand the relation between narcissism and coach behaviours, future research should consider other psychological components that may underpin this relation. These components may include feelings of inferiority or hypersensitivity and anger. Narcissistic individuals may feel inferior to others, and those negative feelings may lead them to use controlling strategies to alleviate those feelings of inferiority (Glad, 2002). Additionally, when they feel their grandiosity has been threatened, narcissistic individuals may react with hypersensitivity and anger using controlling-type behaviours such as hostility in response to the threat (Horowitz & Arthur, 1988). As such, these components should be explored within the sport coaching population.

Finally, the focus of the current thesis was on morality-related coach and athlete outcomes of controlling interpersonal style. Morality-related outcomes may be just one group of maladaptive outcomes that occurs from frustration of basic psychological needs (Ryan & Deci, 2000), and as such, is relevant to "dark side" of coaching. To expand on understanding

of the "dark side" of coaching and the negative influence of narcissism in sport coaching, future research should explore additional coach maladaptive outcomes of the relation between narcissism and controlling interpersonal style such as coach attitudes toward doping or coach burnout.

Practical Implications

The findings of the current thesis suggest practical implications and directions for coaches and sport psychology practitioners. Narcissistic personality trait measured in the current thesis is a subclinical measure that conceptualises narcissism on a continuum (Raskin & Terry, 1988). The mean scores of narcissism across Chapters 3-5 ranged from 12.98-14.25. Despite the mean levels being low, there were cases in the current thesis in which narcissism was high (i.e., maximum NPI scores were 30, 35, and 33 in Chapters 3, 4, and 5, respectively). Throughout the relevant chapters, coaches who scored higher in narcissism reported more frequent use of controlling behaviours. Based on these results, development of interventions aimed at reducing narcissism (as assessed by the NPI-40) or moderating the link between narcissism and controlling behaviours are needed. Additionally, these results uncover knowledge about the potential effects of coach narcissism on coach behaviours and could eventually help sport psychology practitioners develop educational workshops for coaches aimed at creating less negative sport experiences for coaches and athletes.

One possible approach would be to consider reducing the effect of narcissism on controlling coach behaviours by increasing empathy in coaches. Relevant research in the educational literature shows empathic concern can be taught through interventions based around peer-facilitation skills (Hatcher et al., 1994) and self-affirmation techniques (e.g., writing about one's important values; Thomaes, Bushman, Orobio de Castro, Cohen, & Denissen, 2009). For example, Hatcher et al. (1994) found that individuals higher in

narcissism may be able to empathise with others when instructed to take perspective of a suffering other, or when instructed to listen to others and give facilitative feedback. In the same light, Thomaes et al. (2009) found that individuals higher in narcissism who are reminded of the values important to them may become less vulnerable to ego threat which could lessen the motivational source for their aggression. Creating interventions based on such techniques to develop empathy in coaches may help reduce the effect of narcissism on controlling behaviours and also promote use of autonomy-supportive coaching behaviours. Raising coaches' awareness of the negative antecedents (i.e., causes) and outcomes (i.e., consequences) of controlling behaviours may also be an important step towards coaches' adopting greater use of autonomy-supportive strategies. Individuals in positions of authority (e.g., coaches) may become less controlling, that is, avoid controlling statements or intimidating behaviours such as verbal abuse or belittling behaviours, by becoming aware and identifying factors that lead them towards controlling behaviours (e.g., control-oriented personality traits) and understanding how these behaviours may diminish others' functioning (e.g., result in need frustration; Reeve, 2009). Making coaches higher in narcissism more aware of their controlling behaviours and teaching them more adaptive strategies could benefit developing more positive environment for their athletes such as increasing enjoyment and enrolment of young individuals in sport.

Summary and Conclusion

The current thesis makes a unique contribution to the literature, in particular in terms of understanding antecedents of coach interpersonal styles, by integrating research knowledge from social psychology (e.g., narcissism, empathic concern, dominance) and sport coaching (e.g., controlling behaviours, beliefs about controlling style, need frustration, attitudes toward doping, moral disengagement) and using multidisciplinary measures (e.g., NPI from social

psychology, CCBS from sport coaching) to address research questions. First, the current thesis reviewed the SDT literature on antecedents of controlling and need supportive behaviours, established the gaps in the antecedent literature and identified additional potential antecedents of coach interpersonal styles, including narcissism. Second, the findings of the empirical studies revealed a positive association between narcissism and controlling coach behaviours, and no relation between narcissism and autonomy-supportive behaviours. Coaches higher in narcissism (i.e., overall) and its maladaptive facets reported implementing more frequent controlling behaviours compared to those lower in these forms of narcissism. Third, coaches who reported high levels of narcissism were more likely to engage in controlling behaviours and less likely to engage in autonomy-supportive behaviours due to lack of empathic concern toward their athletes. Additionally, effectiveness beliefs – but not normalcy beliefs – about controlling interpersonal style explained some of the effects of adaptive – not maladaptive – narcissism on coaches' controlling behaviours. Finally, controlling coach behaviours were positively linked with the frustration of athletes' psychological needs, athletes' doping attitudes, and coaches' moral disengagement.

In conclusion, the findings presented in this thesis provide consistent initial support for the possibility that narcissism is a key antecedent of controlling behaviours in sport coaches, and also outline some indirect effects that may explain the effects of narcissism on controlling behaviours. Negative outcomes that may result from such coaching behaviours and potentially diminish functioning in coaches and athletes were also identified. In doing so, the research presented in this thesis complements and extends existing research focussed on the "dark side" of coaching. Overall, the findings raise multiple critical theoretical and applied issues to be addressed in future research.

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APPENDIX 1: Interview Questions for Piloting Vignettes

Introduction

Thank you for agreeing on participating in my study. My name is Doris Matosic and I am a first year Ph.D. student in School of Sport, Exercise and Rehabilitation Sciences at University of Birmingham focusing on the area of coaching and motivation in sport. I am conducting a research on how personality and other contextual factors affect different ways in which coaches try to motivate their athletes. The purpose of this pilot study is to check for the clarity of the content and language of the scenarios (refer to the questionnaire scenarios). The responses will help coaches and sport psychology practitioners develop specific strategies and create specific workshops and interventions in educating coaches on how to facilitate more positive sport experiences for athletes.

Our discussion will last for 15 min. During this time, I would like to hear your opinion. Please feel free to ask question throughout the discussion. I want to make sure you speak freely (your opinion is important).

Before starting, please read the participant information sheet and sign consent form if you are willing to participate. I would also ask you to complete a demographic questionnaire before starting. The information you give in this study will be handled confidentially. Your participation in this study is completely voluntary. You may withdraw at any time, for any reason, without penalty.

Discussion

I will read each of the scenarios at the time and you will answer the following questions:

1. How realistic the scenarios are from your perspective?

2. How realistic the responses are (e.g., are the responses relevant to the sport you are coaching?)

3. How clear the scenarios are (e.g., is the language clear, does it make sense?)

4. Do you have any suggestions for making the scenarios clearer or changing them in any way?

Closing

Thank you for your participation. Any comments made here will remain confidential and for research purposes only.

APPENDIX 2: Piloting of Controlling and Autonomy-Supportive Behaviours Responses

BRIEF OVERVIEW:

Autonomy-supportive coaches provide opportunities for their athletes to make choices, feel volitional, and self-regulate their behaviour (Deci & Ryan, 1985). An abundance of research in sport has revealed that athletes' perceptions of autonomy-supportive coaching is related to greater perceptions of basic psychological need, and more autonomous forms of motivation (e.g., Adie et al., 2012; Amorose & Anderson-Butcher, 2007). On the other hand, **controlling coaching behaviours** describe coaches as acting in authoritarian and pressuring ways (Bartholomew et al., 2009). Relevant research suggests that controlling coaching behaviours may promote more controlling motivation because they induce need thwarting and fail to support the need satisfaction (Bartholomew et al., 2011). It is important to emphasise that in physical education and parental literature suggest that that autonomy-supportive and controlling behaviours can be independent of each other or may co-occur (Tessier et al., 2008; Silk et al., 2003), rather than being on the opposite ends of a single continuum (Schaefer, 1965). This topic should be extensively researched in the sport domain as well.

Below are scenarios tapping different narcissistic traits such as authority, lack of empathy, feelings of inferiority, etc. **Applying your SDT knowledge and an overview given above, YOUR TASK is to rate each of the responses how controlling or autonomy-supportive they are based on different scenarios.**
If you have any questions, comments, concerns or suggestions PLEASE don't hesitate to write it on the bottom of each scenario. I will greatly appreciate it.

Note: If for some reason you cannot check the answer box, please place the X mark above the check box. I apologize for that.

"These items pertain to a series of hypothetical scenarios. Each scenario describes a sport specific situation involving a coach and two ways that the coach could respond to this situation. Please read each scenario and the two possible coach responses. Then indicate how much you personally agree or disagree with each possible response. **Think of each response option in terms of what you think would be most appropriate for a coach to do in the given situation.**

Scenario 1

Upon the end of the championship match, the coach gathered his team in the locker room to discuss the outcome of the game. After the coach finished talking, a team captain stood up criticising the coach for the way the team played. The coach was visibly insulted and became intensely hostile in response to the criticism.

What would be appropriate for a coach to do in this situation?

1. **How controlling this behaviour is?**

	Strongly Disagree	*Moderately Disagree*	*Slightly Disagree*	*Neither Agree or Disagree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*
Shout at the player, threatening his captain position.	☐	☐	☐	☐	☐	☐	☐

2. **How autonomy-supportive this behaviour is?**

	Strongly Disagree	*Moderately Disagree*	*Slightly Disagree*	*Neither Agree or Disagree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*
Invite the player to a one-on -one meeting, allowing him to explain their behaviour.	☐	☐	☐	☐	☐	☐	☐

Comments/suggestions for improvement:

Scenario 2
During the training time today, one of the players violated one of the rules of contact established by the coach. The player apologized to the coach, but the player's apology was deemed unacceptable by the coach. This coach has a very strict and unbending policy on failing to obey established rules.

What would be appropriate for a coach to do in this situation?

1. **How controlling this behaviour is?**

	Strongly Disagree	*Moderately Disagree*	*Slightly Disagree*	*Neither Agree or Disagree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*
Show to the player his disappointment by paying less or no attention to the player.	☐	☐	☐	☐	☐	☐	☐

2. **How autonomy-supportive this behaviour is?**

	Strongly Disagree	*Moderately Disagree*	*Slightly Disagree*	*Neither Agree or Disagree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*
Accept the apology that day, but still verbally remind the player about the importance of following established rules.	☐	☐	☐	☐	☐	☐	☐

Comments/suggestions for improvement:

Scenario 3

Two of the players got frustrated about their coach always making all the game decisions without accepting any advice from assistant coaches and players, because he doesn't think he needs them. Both of the players were considering transferring to another team.

What would be appropriate for a coach to do in this situation?

1. **How controlling this behaviour is?**

	Strongly Disagree	*Moderately Disagree*	*Slightly Disagree*	*Neither Agree or Disagree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*
Tell the players he is the boss on the team and they are free to transfer to another team, if they cannot accept that kind of regime.	☐	☐	☐	☐	☐	☐	☐

2. **How autonomy-supportive this behaviour is?**

	Strongly Disagree	*Moderately Disagree*	*Slightly Disagree*	*Neither Agree or Disagree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*
Give players a chance to talk to him and explain alternative ways of them being involved in a game decision.	☐	☐	☐	☐	☐	☐	☐

Comments/suggestions for improvement:

Scenario 4

A player was in the process of renewing his contract for the next year. The player wanted to stay on the same team, but was annoyed with the coach always bragging about how special he is and how he is so much better than other coaches.

What would be appropriate for a coach to do in this situation to keep the player on the team?

1. **How controlling this behaviour is?**

	Strongly Disagree	*Moderately Disagree*	*Slightly Disagree*	*Neither Agree or Disagree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*
Tell the player that he would let down everyone on the team, if he left.	☐	☐	☐	☐	☐	☐	☐

2. **How autonomy-supportive this behaviour is?**

	Strongly Disagree	*Moderately Disagree*	*Slightly Disagree*	*Neither Agree or Disagree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*
Allow the player to share his thoughts and answer any questions fully and carefully.	☐	☐	☐	☐	☐	☐	☐

Comments/suggestions for improvement:

Scenario 5

This coach wants to be centre of attention. Recently, he bought a new car and showed it to everyone on the team. Some of the players were indifferent to him trying to show off his car.

What would be appropriate for a coach to do in this situation?

1. **How controlling this behaviour is?**

	Strongly Disagree	*Moderately Disagree*	*Slightly Disagree*	*Neither Agree or Disagree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*
The next training session punish those players with an extra work out for unacceptable behaviour.	☐	☐	☐	☐	☐	☐	☐

2. **How autonomy-supportive this behaviour is?**

	Strongly Disagree	*Moderately Disagree*	*Slightly Disagree*	*Neither Agree or Disagree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*
Do nothing, because he acknowledges different people have different views on this matter.	☐	☐	☐	☐	☐	☐	☐

Comments/suggestions for improvement:

Scenario 6

Despite the fact that the player was seriously injured all season long, the coach was still putting him to play in every game throughout the championship. The team won the final championship game, although the player's injury got worse afterwards. The coach was very happy about winning the title, but the player was miserable and in pain.

What would be appropriate for a coach to do in this situation?

1. **How controlling this behaviour is?**

	Strongly Disagree	*Moderately Disagree*	*Slightly Disagree*	*Neither Agree or Disagree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*
Tell player to "man up" and deal with it. Injuries are part of sport.	☐	☐	☐	☐	☐	☐	☐

2. **How autonomy-supportive this behaviour is?**

	Strongly Disagree	*Moderately Disagree*	*Slightly Disagree*	*Neither Agree or Disagree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*
Talk to the player, acknowledge how the player feels and offer advice regarding rehabilitation.	☐	☐	☐	☐	☐	☐	☐

Comments/suggestions for improvement:

Scenario 7

A new player was told by his coach that he was strongly expected to perform above average. The coach wanted badly his team to win the championship, because he thought he fully deserved it after years of trying. One of the key players played below coach's expectations, and they lost the final crucial game.

What would be appropriate for a coach to do in this situation?

1. **How controlling this behaviour is?**

	Strongly Disagree	*Moderately Disagree*	*Slightly Disagree*	*Neither Agree or Disagree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*
Let the player know in front of the whole team that he let the coach down.	☐	☐	☐	☐	☐	☐	☐

2. **How autonomy-supportive this behaviour is?**

	Strongly Disagree	*Moderately Disagree*	*Slightly Disagree*	*Neither Agree or Disagree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*
Talk it over with the player to understand further what the problem was.	☐	☐	☐	☐	☐	☐	☐

Comments/suggestions for improvement:

Scenario 8

A coach always appears to try hard to be confident, if not arrogant, about his coaching abilities. However, every time during games played against an opponent of similar or better ranking, he appears pessimistic when talking to his players, saying things such as "it's a difficult game, we may be beaten" and "I hope we not fail", giving the impression that he is unsure about himself. In the last game, one of the players remarked that the coach might have a problem coaching effectively against equal or better opposition.

What would be appropriate for a coach to do in this situation?

1. **How controlling this behaviour is?**

	Strongly Disagree	*Moderately Disagree*	*Slightly Disagree*	*Neither Agree or Disagree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*
Discipline the player via a fine or other form of punishment.	☐	☐	☐	☐	☐	☐	☐

2. **How autonomy-supportive this behaviour is?**

	Strongly Disagree	*Moderately Disagree*	*Slightly Disagree*	*Neither Agree or Disagree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*
Provide rationale to the player why he is acting the way he is during the game time.	☐	☐	☐	☐	☐	☐	☐

Comments/suggestions for improvement:

Scenario 9

After experiencing a death in his family, a player came back to training. The player was feeling run-down emotionally, and his performance in training was weak. The coach was unhappy about the player's performance and showed no understanding of his personal circumstances. The player went home and did not return the next day.

What would be appropriate for a coach to do in this situation?

1. **How controlling this behaviour is?**

	Strongly Disagree	*Moderately Disagree*	*Slightly Disagree*	*Neither Agree or Disagree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*
Confront the player and questioned his loyalty to the team.	☐	☐	☐	☐	☐	☐	☐

2. **How autonomy-supportive this behaviour is?**

	Strongly Disagree	*Moderately Disagree*	*Slightly Disagree*	*Neither Agree or Disagree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*
Invite the player for a discussion to get his perspective.	☐	☐	☐	☐	☐	☐	☐

Comments/suggestions for improvement:

Scenario 10

In the last game, a player failed to listen to the coach's instructions about discretely hurting an opponent in order to gain advantage and score points.

What would be appropriate for a coach to do in this situation?

1. **How controlling this behaviour is?**

	Strongly Disagree	*Moderately Disagree*	*Slightly Disagree*	*Neither Agree or Disagree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*
Promise player a reward, if he does as told.	☐	☐	☐	☐	☐	☐	☐

2. **How autonomy-supportive this behaviour is?**

	Strongly Disagree	*Moderately Disagree*	*Slightly Disagree*	*Neither Agree or Disagree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*
Leave the player in the game, but remind him that he needs to be listening to the coach's instructions and that, if he has any disagreements, he should express them ahead of time.	☐	☐	☐	☐	☐	☐	☐

Comments/suggestions for improvement:

Scenario 11

During the game, the coach was berating an official for what he considered an unfair call. The coach considered he knows the rules of the sport better. One of the players tried to calm the coach down by explaining to him it was a fair call and he was not right this time.

What would be appropriate for a coach to do in this situation?

1. **How controlling this behaviour is?**

	Strongly Disagree	*Moderately Disagree*	*Slightly Disagree*	*Neither Agree or Disagree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*
Shout at the player in front of others and make him apologize.	☐	☐	☐	☐	☐	☐	☐

2. **How autonomy-supportive this behaviour is?**

	Strongly Disagree	*Moderately Disagree*	*Slightly Disagree*	*Neither Agree or Disagree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*
Explain to the player the reason why acted like that.	☐	☐	☐	☐	☐	☐	☐

Comments/suggestions for improvement:

Scenario 12

At the sports banquet, the coach was supposed to give a speech on the achievements of his team. However, he spent most of the time highlighting the successes in the first person, as if he was the only one responsible for them. When it was the turn for the best athlete to talk, the player praised everyone on the team for the accomplishments and said a simple "thank you" to the coach. The coach was furious for not receiving more credit from the player.

What would be appropriate for coach to do in the situation?

1. **How controlling this behaviour is?**

	Strongly Disagree	*Moderately Disagree*	*Slightly Disagree*	*Neither Agree or Disagree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*
Not applaud him after the speech and visibly show his disappointment.	☐	☐	☐	☐	☐	☐	☐

2. **How autonomy-supportive this behaviour is?**

	Strongly Disagree	*Moderately Disagree*	*Slightly Disagree*	*Neither Agree or Disagree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*
Applaud the player with the rest of his teammates and praise him for being a team player.	☐	☐	☐	☐	☐	☐	☐

Comments/suggestions for improvement:

APPENDIX 3: Autonomy-Supportive and Controlling Behaviours Measure of Narcissistic Coaches (Scenarios)

This appendix was published as an online supplement material of Chapter 3 (Matosic et al., 2015

These items pertain to a series of hypothetical scenarios. Each scenario describes a sport specific situation involving a coach and two ways that the coach could respond to this situation. All the scenarios refer to male coaches; however they are equally applicable to female coaches. Also, scenarios are described in a team sport setting, but could be applicable to the individual sport setting as well. Please ignore the gender of the coach and the sport setting while reading the scenarios below and focus on the behaviours only. Please read each scenario and the two possible coach responses. Then indicate how much you personally agree or disagree with each possible response. **Think of each response option in terms of what you think would be most appropriate for a coach of the level you are coaching in to do in the given situation.**

ANSWER SCALE:

1	2	3	4	5	6
STRONGLY DISAGREE					STRONGLY AGREE

<u>Scenario 1 (Hypersensitivity to criticism)</u>

Upon the end of an important league game, the coach gathered his team on the field to discuss the team's defeat. After the coach finished talking, a team captain stood up criticising the coach for the way the team played. The coach was visibly insulted and became intensely hostile in response to the criticism.

What would be appropriate for a coach to do in this situation?

1. Shout at the player, threatening his captain position. **(controlling)**

2. Invite the player to a one-on -one meeting, to discuss how things might be resolved. **(autonomy-supportive)**

Scenario 2 (Authority)

During the training session today, one of the players violated one of the rules of conduct established by the coach. The player apologized to the coach, but the player's apology was deemed unacceptable by the coach. This coach has a very strict and inflexible policy on failing to obey established rules.

What would be appropriate for a coach to do in this situation?

1. Show to the player his disappointment by paying less or no attention to the player. **(controlling)**

2. Accept the apology that day, but still verbally remind the player right after the session about the importance of following established rules. **(autonomy-supportive)**

Scenario 3 (Self-sufficiency)

Two of the players got frustrated about their coach always making all the game decisions without accepting any advice from assistant coaches and players, because the coach doesn't think he needs them. Both of the players were considering transferring to another team.

What would be appropriate for a coach to do in this situation?

1. Give players a chance to talk to him and explain alternative ways of them being involved in a game decision. **(autonomy-supportive)**

2. Tell the players he is the boss on the team and they are free to transfer to another team, if they cannot accept that kind of regime. **(controlling)**

Scenario 4 (Superiority)

A player was in the process of registering to play for the team next year. The player wanted to stay on the same team, but was annoyed with the coach always bragging about how special he (the coach) is and how he is so much better than other coaches.

What would be appropriate for a coach to do in this situation to keep the player on the team?

1. Allow the player to share his thoughts and answer any questions fully and carefully. **(autonomy-supportive)**

2. Tell the player that he would let down everyone on the team down if he left. **(controlling)**

Scenario 5 (Exhibitionism)

This coach wants to be in the centre of attention. He is always showing off by demonstrating how good he is with certain game components (e.g., taking a penalty). Some of the players were rude to him trying to make him stop doing that.

What would be appropriate for a coach to do in this situation?

1. The next training session punish those players with an extra work out for unacceptable behaviour. **(controlling)**

2. Respect that different people have different views on this matter and say so to his players. **(autonomy-supportive)**

Scenario 6 (Exploitativeness)

Despite the fact that the player was seriously injured all season long, the coach was still playing him in every game throughout the season. The team won the final game, although the player's injury got worse afterwards. The coach was very happy about winning the title, but the player was miserable and in pain.

What would be appropriate for a coach to do in this situation?

1. Talk to the player, acknowledge how the player feels and offer advice regarding rehabilitation. **(autonomy-supportive)**

2. Tell player to "man up" and deal with it. Injuries are part of sport. **(controlling)**

Scenario 7 (Entitlement)

A key player was told by his coach that it was crucial for him to perform above average. The coach really wanted his team to win the title, because he thought he fully deserved it after years of trying. The player played below coach's expectations and the team lost the final crucial game.

What would be appropriate for a coach to do in this situation?

1. Let the player know in front of the whole team that he let the coach down. **(controlling)**

2. Talk it over with the player to understand further what the problem was. **(autonomy-supportive)**

Scenario 8 (Feelings of Inferiority)

A coach always appears to try hard to be confident, if not arrogant, about his coaching abilities. However, every time during games played against an opponent of similar or better ranking, he appears pessimistic when talking to his players, saying things such as "it's a difficult game, we may be beaten" and "I hope we do not fail", giving the impression that he is unsure about himself. In the last game, one of the players remarked that the coach might have a problem coaching effectively against equal or better opposition.

What would be appropriate for a coach to do in this situation?

1. Provide rationale to the player why he is acting the way he is during the game time. **(autonomy-supportive)**

2. Discipline the player via a fine or other form of punishment. **(controlling)**

Scenario 9 (Lack of Empathy)

Following death in his family, a player came back to training. The player was feeling run-down emotionally, and his performance in training was weak. The coach was unhappy about the player's performance and showed no understanding of his personal circumstances. The player went home and did not return the next day.

What would be appropriate for a coach to do in this situation?

1. Confront the player and question his loyalty to the team. **(controlling)**

2. Invite the player for a discussion to get his perspective. **(autonomy-supportive)**

Scenario 10 (Amorality)

In the last game, a player failed to listen to the coach's instructions about discretely hurting an opponent in order to gain advantage and score points.

What would be appropriate for a coach to do in this situation?

1. Leave the player in the game, but remind him that he needs to be listening to the coach's instructions and that, if he has any disagreements, he should express them ahead of time. **(autonomy-supportive)**

2. Promise the player a reward, if he does as told. **(controlling)**

Scenario 11 (Arrogance)

During the game the coach was berating an official for what he considered an unfair decision. The coach considered he knew the rules of the sport better than the official. One of the players tried to calm the coach down by explaining to him it was a fair decision and he was not right this time.

What would be appropriate for a coach to do in this situation?

1. Explain to the player the reason why he acted like that. **(autonomy-supportive)**

2. Shout at the player in front of others and make the player apologise. **(controlling)**

Scenario 12 (Grandiosity)

At the sports banquet, the coach was supposed to give a speech on the achievements of his team. However, he spent most of the time highlighting the successes in the first person, as if he was the only one responsible for them. When it was the turn for the best athlete to talk, the player praised everyone on the team for the accomplishments and said a simple "thank you" to the coach. The coach was furious for not receiving more credit from the player.

What would be appropriate for coach to do in the situation?

1. Not applaud him after his speech and visibly show his disappointment. **(controlling)**

2. Applaud the player with the rest of his teammates and praise him for being a team player. **(autonomy-supportive)**

NOTE:

All the answers were scored in the same direction (no reverse coding). The higher score on the scale represents higher autonomy-supportive and controlling behaviours, respectively.

Narcissistic personality traits and behaviours (i.e., autonomy-supportive, controlling) described in the scenario and responses are named in the brackets.

APPENDIX 4: Chapter 3 Questionnaire Items

Demographic Questionnaire

Demographic questionnaire
What is your coaching qualification (e.g., UKCC level 1)?
D.O.B. (MM/DD/YY)
Circle your gender: *male* *female*
What is the main sport are you currently coaching?
What is the level of sport you are currently coaching (e.g., recreational, regional)?
How many years have you been involved in coaching (total)?
How many years have you been coaching the current sport?
How many years have you been coaching your current team?
How many hours per week do you spend coaching?
How would you describe yourself? White British ☐ White Irish ☐ Other White ☐ Asian or Asian British: Indian ☐ Asian or Asian British: Pakistani ☐ Asian or Asian British: Bangladeshi ☐ Asian or Asian British: Chinese ☐ Asian or Asian British: Other Asian ☐ Black or Black British ☐ Mixed ☐ Other Ethnic Group *(please specify*) ☐

Autonomy-supportive and Controlling Behaviours Measure of Narcissism in Sport Coaches

These items pertain to a series of hypothetical scenarios. Each scenario describes a sport specific situation involving a coach and two ways that the coach could respond to this situation. All the scenarios refer to male coaches; however they are equally applicable to female coaches. Also, scenarios are described in a team sport setting, but could be applicable to the individual sport setting as well. *Please ignore the gender of the coach and the sport setting while reading the scenarios below and focus on the behaviours only*. Please read each scenario and the two possible coach responses. Then indicate how much you personally agree or disagree with each possible response. Think of each response option in terms of what you think would be most appropriate for a coach of the level you are coaching in to do in the given situation.

Scenario 1

Upon the end of an important league game, the coach gathered his team on the field to discuss the team's defeat. After the coach finished talking, a team captain stood up criticising the coach for the way the team played. The coach was visibly insulted and became intensely hostile in response to the criticism.

What would be appropriate for a coach to do in this situation?

		Strongly Disagree	*Moderately Disagree*	*Slightly Disagree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*
1.	Shout at the player, threatening his captain position.	1	2	3	4	5	6
2.	Invite the player to a one-on -one meeting, to discuss how things might be resolved.	1	2	3	4	5	6

Scenario 2

During the training session today, one of the players violated one of the rules of conduct established by the coach. The player apologized to the coach, but the player's apology was deemed unacceptable by the coach. This coach has a very strict and inflexible policy on failing to obey established rules.

What would be appropriate for a coach to do in this situation?

		Strongly Disagree	*Moderately Disagree*	*Slightly Disagree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*
1.	Show to the player his disappointment by paying less or no attention to the player.	1	2	3	4	5	6
2.	Accept the apology that day, but still verbally remind the player right after the session about the importance of following established rules.	1	2	3	4	5	6

Scenario 3

Two of the players got frustrated about their coach always making all the game decisions without accepting any advice from assistant coaches and players, because the coach doesn't think he needs them. Both of the players were considering transferring to another team.

What would be appropriate for a coach to do in this situation?

		Strongly Disagree	*Moderately Disagree*	*Slightly Disagree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*
1.	Give players a chance to talk to him and explain alternative ways of them being involved in a game decision.	1	2	3	4	5	6
2.	Tell the players he is the boss on the team and they are free to transfer to another team, if they cannot accept that kind of regime.	1	2	3	4	5	6

Scenario 4

A player was in the process of registering to play for the team next year. The player wanted to stay on the same team, but was annoyed with the coach always bragging about how special he (the coach) is and how he is so much better than other coaches.

What would be appropriate for a coach to do in this situation to keep the player on the team?

		Strongly Disagree	*Moderately Disagree*	*Slightly Disagree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*
1.	Allow the player to share his thoughts and answer any questions fully and carefully.	1	2	3	4	5	6
2.	Tell the player that he would let down everyone on the team down if he left.	1	2	3	4	5	6

Scenario 5

This coach wants to be in the centre of attention. He is always showing off by demonstrating how good he is with certain game components (e.g., taking a penalty). Some of the players were rude to him trying to make him stop doing that.

What would be appropriate for a coach to do in this situation?

		Strongly Disagree	*Moderately Disagree*	*Slightly Disagree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*
1.	The next training session punish those players with an extra work out for unacceptable behaviour.	1	2	3	4	5	6
2.	Respect that different people have different views on this matter and say so to his players.	1	2	3	4	5	6

Scenario 6

Despite the fact that the player was seriously injured all season long, the coach was still playing him in every game throughout the season. The team won the final game, although the player's injury got worse afterwards. The coach was very happy about winning the title, but the player was miserable and in pain.

What would be appropriate for a coach to do in this situation?

		Strongly Disagree	*Moderately Disagree*	*Slightly Disagree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*
1.	Talk to the player, acknowledge how the player feels and offer advice regarding rehabilitation.	1	2	3	4	5	6
2.	Tell player to "man up" and deal with it. Injuries are part of sport.	1	2	3	4	5	6

Scenario 7

A key player was told by his coach that it was crucial for him to perform above average. The coach really wanted his team to win the title, because he thought he fully deserved it after years of trying. The player played below coach's expectations and the team lost the final crucial game.

What would be appropriate for a coach to do in this situation?

		Strongly Disagree	*Moderately Disagree*	*Slightly Disagree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*
1.	Let the player know in front of the whole team that he let the coach down.	1	2	3	4	5	6
2.	Talk it over with the player to understand further what the problem was.	1	2	3	4	5	6

Scenario 8

A coach always appears to try hard to be confident, if not arrogant, about his coaching abilities. However, every time during games played against an opponent of similar or better ranking, he appears pessimistic when talking to his players, saying things such as "it's a difficult game, we may be beaten" and "I hope we do not fail", giving the impression that he is unsure about himself. In the last game, one of the players remarked that the coach might have a problem coaching effectively against equal or better opposition.

What would be appropriate for a coach to do in this situation?

		Strongly Disagree	*Moderately Disagree*	*Slightly Disagree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*
1.	Provide rationale to the player why he is acting the way he is during the game time.	1	2	3	4	5	6
2.	Discipline the player via a fine or other form of punishment.	1	2	3	4	5	6

Scenario 9

Following death in his family, a player came back to training. The player was feeling run-down emotionally, and his performance in training was weak. The coach was unhappy about the player's performance and showed no understanding of his personal circumstances. The player went home and did not return the next day.

What would be appropriate for a coach to do in this situation?

		Strongly Disagree	*Moderately Disagree*	*Slightly Disagree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*
1.	Confront the player and question his loyalty to the team.	1	2	3	4	5	6
2.	Invite the player for a discussion to get his perspective.	1	2	3	4	5	6

Scenario 10

In the last game, a player failed to listen to the coach's instructions about discretely hurting an opponent in order to gain advantage and score points.

What would be appropriate for a coach to do in this situation?

		Strongly Disagree	*Moderately Disagree*	*Slightly Disagree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*
1.	Keep the player in the game without saying anything.	1	2	3	4	5	6
2.	Leave the player in the game, but remind him that he needs to be listening to the coach's instructions and that, if he has any disagreements, he should express them ahead of time.	1	2	3	4	5	6

Scenario 11

During the game the coach was berating an official for what he considered an unfair decision. The coach considered he knew the rules of the sport better than the official. One of the players tried to calm the coach down by explaining to him it was a fair decision and he was not right this time.

What would be appropriate for a coach to do in this situation?

		Strongly Disagree	*Moderately Disagree*	*Slightly Disagree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*
1.	Explain to the player the reason why he acted like that.	1	2	3	4	5	6
2.	Shout at the player in front of others and make the player apologize.	1	2	3	4	5	6

Scenario 12

At the sports banquet, the coach was supposed to give a speech on the achievements of his team. However, he spent most of the time highlighting the successes in the first person, as if he was the only one responsible for them. When it was the turn for the best athlete to talk, the player praised everyone on the team for the accomplishments and said a simple "thank you" to the coach. The coach was furious for not receiving more credit from the player.

What would be appropriate for coach to do in the situation?

		Strongly Disagree	*Moderately Disagree*	*Slightly Disagree*	*Slightly Agree*	*Moderately Agree*	*Strongly Agree*
1.	Not applaud him after his speech and visibly show his disappointment.	1	2	3	4	5	6
2.	Applaud the player with the rest of his teammates and praise him for being a team player.	1	2	3	4	5	6

Narcissistic Personality Inventory (NPI-40; Raskin & Terry, 1988)

Read each pair of statements and then choose the one that is closer to your own feelings and beliefs. Indicate your answer by circling the corresponding number in bold "0" or "1" to the right of each item. You should choose only one answer per row. Please do not skip any items.				
1.	I have a natural talent for influencing people.	**0**	I am not good at influencing people.	**1**
2.	Modesty doesn't become me.	**0**	I am essentially a modest person.	**1**
3.	I would do almost anything on a dare.	**0**	I tend to be a fairly cautious person.	**1**
4.	When people compliment me I sometimes get embarrassed.	**0**	I know that I am good because everybody keeps telling me so.	**1**
5.	The thought of ruling the world frightens the hell out of me.	**0**	If I ruled the world it would be a much better place.	**1**
6.	I can usually talk my way out of anything.	**0**	I try to accept the consequences of my behavior.	**1**
7.	I prefer to blend in with the crowd.	**0**	I like to be the center of attention.	**1**
8.	I will be a success.	**0**	I am not too concerned about success.	**1**
9.	I am no better or no worse than most people.	**0**	I think I am a special person.	**1**
10.	I am not sure if I would make a good leader.	**0**	I see myself as a good leader.	**1**
11.	I am assertive.	**0**	I wish I were more assertive.	**1**
12.	I like having authority over people.	**0**	I don't mind following orders.	**1**
13.	I find it easy to manipulate people.	**0**	I don't like it when I find myself manipulating people.	**1**
14.	I insist upon getting the respect that is due me.	**0**	I usually get the respect that I deserve.	**1**
15.	I don't particularly like to show off my body.	**0**	I like to display my body.	**1**
16.	I can read people like a book.	**0**	People are sometimes hard to understand.	**1**
17.	If I feel competent I am willing to take responsibility for making decisions.	**0**	I like to take responsibility for making decisions.	**1**
18.	I just want to be reasonably happy.	**0**	I want to amount to something in the eyes of the world.	**1**
19.	My body is nothing special.	**0**	I like to look at my body.	**1**
20	I try not to be a show off.	**0**	I am apt to show off if I get the chance.	**1**
21.	I always know what I am doing.	**0**	Sometimes I am not sure of what I am doing.	**1**
22.	I sometimes depend on people to get things done.	**0**	I rarely depend on anyone else to get things done.	**1**
23.	Sometimes I tell good stories.	**0**	Everybody likes to hear my stories.	**1**
24.	I expect a great deal from other people.	**0**	I like to do things for other people.	**1**

Narcissistic Personality Inventory (Continued)

Read each pair of statements and then choose the one that is closer to your own feelings and beliefs. Indicate your answer by circling the corresponding number in bold "0" or "1" to the right of each item. You should choose only one answer per row. Please do not skip any items				
25.	I will never be satisfied until I get all that I deserve.	**0**	I take my satisfactions as they come.	**1**
26.	Compliments embarrass me.	**0**	I like to be complimented.	**1**
27.	I have a strong will to power.	**0**	Power for its own sake doesn't interest me.	**1**
28.	I don't very much care about new fads and fashions.	**0**	I like to start new fads and fashions.	**1**
29.	I like to look at myself in the mirror.	**0**	I am not particularly interested in looking at myself in the mirror.	**1**
30.	I really like to be the center of attention.	**0**	It makes me uncomfortable to be the center of attention.	**1**
31.	I can live my life in any way I want to.	**0**	People can't always live their lives in terms of what they want.	**1**
32.	Being an authority doesn't mean that much to me.	**0**	People always seem to recognize my authority.	**1**
33.	I would prefer to be a leader.	**0**	It makes little difference to me whether I am a leader or not.	**1**
34.	I am going to be a great person.	**0**	I hope I am going to be successful.	**1**
35.	People sometimes believe what I tell them.	**0**	I can make anybody believe anything I want them to.	**1**
36.	I am a born leader.	**0**	Leadership is a quality that takes a long time to develop.	**1**
37.	I wish somebody would someday write my biography.	**0**	I don't like people to pry into my life for any reason.	**1**
38.	I get upset when people don't notice how I look when I go out in public.	**0**	I don't mind blending into the crowd when I go out in public.	**1**
39.	I am more capable than other people.	**0**	There is a lot that I can learn from other people.	**1**
40.	I am much like everybody else.	**0**	I am an extraordinary person.	**1**

International Personality Item Pool Dominance Scale (IPIP; Goldberg et al., 2006)

Describe yourself as you generally are now, not as you wish to be in the future. Describe yourself as you honestly see yourself, in relation to other people you know of the same sex as you are, and roughly your same age. Your responses will be kept in absolute confidence.							
		Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree
1.	Try to surpass others' accomplishments.	1	2	3	4	5	6
2.	Try to outdo others.	1	2	3	4	5	6
3.	Am quick to correct others.	1	2	3	4	5	6
4.	Impose my will on others.	1	2	3	4	5	6
5.	Demand explanations from others.	1	2	3	4	5	6
6.	Want to control the conversation.	1	2	3	4	5	6
7.	Am not afraid of providing criticism.	1	2	3	4	5	6
8.	Challenge others' points of view.	1	2	3	4	5	6
9.	Lay down the law to others.	1	2	3	4	5	6
10.	Put people under pressure.	1	2	3	4	5	6
11.	Hate to seem pushy.	1	2	3	4	5	6

Interpersonal Reactivity Scale – Empathic Concern Subscale (Davis, 1983)

The following statements inquire about your thoughts and feelings in a variety of situations. For each item indicate how well it describes you. Read each item carefully before responding.						
		Does not describe me well	Describes me slightly	Somewhat describes me	Describes me fairly well	Describes me very well
1.	When I see someone being taken advantage of, I feel kind of protective toward them.	0	1	2	3	4
2.	When I see someone being treated unfairly, I sometimes don't feel very much pity for them.	0	1	2	3	4
3.	I often have tender, concerned feelings for people less fortunate than me.	0	1	2	3	4
4.	I would describe myself as a pretty soft-hearted person.	0	1	2	3	4
5.	Sometimes I don't feel sorry for other people when they are having problems.	0	1	2	3	4
6.	Other people's misfortunes do not usually disturb me a great deal.	0	1	2	3	4
7.	I am often quite touched by things that I see happen.	0	1	2	3	4

APPENDIX 5: Chapter 4 Coach Questionnaire Items

Demographic Questionnaire

Demographic questionnaire
What is your coaching qualification (e.g., UKCC level 1)?
D.O.B. (MM/DD/YY)
Circle your gender: *male* *female*
What is the main sport are you currently coaching?
What is the level of sport you are currently coaching (e.g., recreational, regional)?
How many years have you been involved in coaching (total)?
How many years have you been coaching the current sport?
How many years have you been coaching your current team?
How many hours per week do you spend coaching?
How would you describe yourself? White British ☐ White Irish ☐ Other White ☐ Asian or Asian British: Indian ☐ Asian or Asian British: Pakistani ☐ Asian or Asian British: Bangladeshi ☐ Asian or Asian British: Chinese ☐ Asian or Asian British: Other Asian ☐ Black or Black British ☐ Mixed ☐ Other Ethnic Group *(please specify)* ☐

Narcissistic Personality Inventory (NPI; Raski & Terry, 1988)

Read each pair of statements and then choose the one that is closer to your own feelings and beliefs. Indicate your answer by circling the corresponding number in bold "0" or "1" to the right of each item. You should choose only one answer per row. Please do not skip any items.				
1.	I have a natural talent for influencing people.	**0**	I am not good at influencing people.	**1**
2.	Modesty doesn't become me.	**0**	I am essentially a modest person.	**1**
3.	I would do almost anything on a dare.	**0**	I tend to be a fairly cautious person.	**1**
4.	When people compliment me I sometimes get embarrassed.	**0**	I know that I am good because everybody keeps telling me so.	**1**
5.	The thought of ruling the world frightens the hell out of me.	**0**	If I ruled the world it would be a much better place.	**1**
6.	I can usually talk my way out of anything.	**0**	I try to accept the consequences of my behavior.	**1**
7.	I prefer to blend in with the crowd.	**0**	I like to be the center of attention.	**1**
8.	I will be a success.	**0**	I am not too concerned about success.	**1**
9.	I am no better or no worse than most people.	**0**	I think I am a special person.	**1**
10.	I am not sure if I would make a good leader.	**0**	I see myself as a good leader.	**1**
11.	I am assertive.	**0**	I wish I were more assertive.	**1**
12.	I like having authority over people.	**0**	I don't mind following orders.	**1**
13.	I find it easy to manipulate people.	**0**	I don't like it when I find myself manipulating people.	**1**
14.	I insist upon getting the respect that is due me.	**0**	I usually get the respect that I deserve.	**1**
15.	I don't particularly like to show off my body.	**0**	I like to display my body.	**1**
16.	I can read people like a book.	**0**	People are sometimes hard to understand.	**1**
17.	If I feel competent I am willing to take responsibility for making decisions.	**0**	I like to take responsibility for making decisions.	**1**
18.	I just want to be reasonably happy.	**0**	I want to amount to something in the eyes of the world.	**1**
19.	My body is nothing special.	**0**	I like to look at my body.	**1**
20	I try not to be a show off.	**0**	I am apt to show off if I get the chance.	**1**
21.	I always know what I am doing.	**0**	Sometimes I am not sure of what I am doing.	**1**
22.	I sometimes depend on people to get things done.	**0**	I rarely depend on anyone else to get things done.	**1**
23.	Sometimes I tell good stories.	**0**	Everybody likes to hear my stories.	**1**
24.	I expect a great deal from other people.	**0**	I like to do things for other people.	**1**

Narcissistic Personality Inventory (Continued)

Read each pair of statements and then choose the one that is closer to your own feelings and beliefs. Indicate your answer by circling the corresponding number in bold "0" or "1" to the right of each item. You should choose only one answer per row. Please do not skip any items				
25.	I will never be satisfied until I get all that I deserve.	**0**	I take my satisfactions as they come.	**1**
26.	Compliments embarrass me.	**0**	I like to be complimented.	**1**
27.	I have a strong will to power.	**0**	Power for its own sake doesn't interest me.	**1**
28.	I don't very much care about new fads and fashions.	**0**	I like to start new fads and fashions.	**1**
29.	I like to look at myself in the mirror.	**0**	I am not particularly interested in looking at myself in the mirror.	**1**
30.	I really like to be the center of attention.	**0**	It makes me uncomfortable to be the center of attention.	**1**
31.	I can live my life in any way I want to.	**0**	People can't always live their lives in terms of what they want.	**1**
32.	Being an authority doesn't mean that much to me.	**0**	People always seem to recognize my authority.	**1**
33.	I would prefer to be a leader.	**0**	It makes little difference to me whether I am a leader or not.	**1**
34.	I am going to be a great person.	**0**	I hope I am going to be successful.	**1**
35.	People sometimes believe what I tell them.	**0**	I can make anybody believe anything I want them to.	**1**
36.	I am a born leader.	**0**	Leadership is a quality that takes a long time to develop.	**1**
37.	I wish somebody would someday write my biography.	**0**	I don't like people to pry into my life for any reason.	**1**
38.	I get upset when people don't notice how I look when I go out in public.	**0**	I don't mind blending into the crowd when I go out in public.	**1**
39.	I am more capable than other people.	**0**	There is a lot that I can learn from other people.	**1**
40.	I am much like everybody else.	**0**	I am an extraordinary person.	**1**

International Personality Item Pool Dominance Scale (IPIP; Goldberg et al., 2006)

Describe yourself as you generally are now, not as you wish to be in the future. Describe yourself as you honestly see yourself, in relation to other people you know of the same sex as you are, and roughly your same age. Your responses will be kept in absolute confidence.						
		Very Inaccurate	Moderately Inaccurate	Neither Inaccurate nor Accurate	Moderately Accurate	Very Accurate
1.	Try to surpass others' accomplishments.	1	2	3	4	5
2.	Try to outdo others.	1	2	3	4	5
3.	Am quick to correct others.	1	2	3	4	5
4.	Impose my will on others.	1	2	3	4	5
5.	Demand explanations from others.	1	2	3	4	5
6.	Want to control the conversation.	1	2	3	4	5
7.	Am not afraid of providing criticism.	1	2	3	4	5
8.	Challenge others' points of view.	1	2	3	4	5
9.	Lay down the law to others.	1	2	3	4	5
10.	Put people under pressure.	1	2	3	4	5
11.	Hate to seem pushy.	1	2	3	4	5

Interpersonal Reactivity Scale – Empathic Concern Subscale (Davis, 1983)

The following statements inquire about your thoughts and feelings in a variety of situations. For each item indicate how well it describes you. Read each item carefully before responding.						
		Does not describe me well	Describes me slightly	Somewhat describes me	Describes me fairly well	Describes me very well
1.	When I see someone being taken advantage of, I feel kind of protective toward them.	0	1	2	3	4
2.	When I see someone being treated unfairly, I sometimes don't feel very much pity for them.	0	1	2	3	4
3.	I often have tender, concerned feelings for people less fortunate than me.	0	1	2	3	4
4.	I would describe myself as a pretty soft-hearted person.	0	1	2	3	4
5.	Sometimes I don't feel sorry for other people when they are having problems.	0	1	2	3	4
6.	Other people's misfortunes do not usually disturb me a great deal.	0	1	2	3	4
7.	I am often quite touched by things that I see happen.	0	1	2	3	4

APPENDIX 6: Chapter 4 Athlete Questionnaire Items

Demographic Questionnaire

<table>
<tr><th colspan="5">Demographic questionnaire</th></tr>
<tr><td colspan="5">What is the main sport you are currently participating in (e.g., football)?</td></tr>
<tr><td colspan="5">D.O.B. (MM/DD/YY) _____</td></tr>
<tr><td colspan="5">Circle your gender:
male female</td></tr>
<tr><td colspan="5">What is the level of sport you are participating in (e.g., recreational, regional)?</td></tr>
<tr><td colspan="5">How many years/months have you been involved in the current sport?</td></tr>
<tr><td colspan="5">How many years/months have you been coached by the current coach?</td></tr>
<tr><td colspan="5">How many years have you been participating for the current team?</td></tr>
<tr><td colspan="5">How many hours per week do you spend practicing current sport?</td></tr>
<tr><td colspan="5">How would you describe yourself? (circle one answer below)</td></tr>
<tr><td>White British</td><td>White Irish</td><td>Other White</td><td>Asian or Asian British: Indian</td><td>Asian or Asian British: Pakistani</td></tr>
<tr><td colspan="2">Asian or Asian British: Bangladeshi</td><td colspan="2">Asian or Asian British: Chinese</td><td>Asian or Asian British: Other Asian</td></tr>
<tr><td>Black or Black British</td><td>Mixed</td><td colspan="3">Other Ethnic Group (please specify):_____</td></tr>
</table>

Controlling Coach Behaviors Scale (CCBS; Bartholomew, Ntoumanis, & Thøgersen-Ntoumani, 2010)

The following statements relate to your general experiences with your current main coach. Each coach has a different style and no one style is necessarily better than another. Please indicate how much you agree or disagree with each statement.								
		Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Moderately Agree	Strongly Agree
1.	My coach is less friendly with me if I don‘t make the effort to see things his/her way.	1	2	3	4	5	6	7
2.	My coach shouts at me in front of others to make me do certain things.	1	2	3	4	5	6	7
3.	My coach only uses rewards/praise so that I stay focused on tasks during training.	1	2	3	4	5	6	7
4.	My coach is less supportive of me when I am not training and competing well.	1	2	3	4	5	6	7
5.	My coach tries to control what I do during my free time.	1	2	3	4	5	6	7
6.	My coach threatens to punish me to keep me in line during training.	1	2	3	4	5	6	7
7.	My coach tries to motivate me by promising to reward me if I do well.	1	2	3	4	5	6	7
8.	My coach pays me less attention if I have displeased him/her.	1	2	3	4	5	6	7
9.	My coach intimidates me into doing the things that he/she wants me to do.	1	2	3	4	5	6	7
10.	My coach tries to interfere in aspects of my life outside of my sport.	1	2	3	4	5	6	7
11.	My coach only uses rewards/praise so that I complete all the tasks he/she sets during training.	1	2	3	4	5	6	7
12.	My coach is less accepting of me if I have disappointed him/her.	1	2	3	4	5	6	7
13.	My coach embarrasses me in front of others if I do not do the things he/she wants me to do.	1	2	3	4	5	6	7
14.	My coach only uses rewards/praise to make me train harder.	1	2	3	4	5	6	7
15.	My coach expects my whole life to centre on my sport participation.	1	2	3	4	5	6	7

Psychological Need Thwarting Scale (PNTS; Bartholomew, Ntoumanis, Ryan, & Thøgersen-Ntoumani, 2011)

The following statements relate to the general experiences you have whilst in your sport. Remember, there are no right or wrong answers; please be honest. Please indicate how much you agree or disagree with each statement.								
	In my sport…	Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Moderately Agree	Strongly Agree
1.	I feel prevented from making choices with regard to the way I train.	1	2	3	4	5	6	7
2.	There are situations where I am made to feel inadequate.	1	2	3	4	5	6	7
3.	I feel pushed to behave in certain ways.	1	2	3	4	5	6	7
4.	I feel I am rejected by those around me.	1	2	3	4	5	6	7
5.	I feel forced to follow training decisions made for me.	1	2	3	4	5	6	7
6.	I feel inadequate because I am not given opportunities to fulfil my potential.	1	2	3	4	5	6	7
7.	I feel under pressure to agree with the training regime I am provided.	1	2	3	4	5	6	7
8.	I feel others can be dismissive of me.	1	2	3	4	5	6	7
9.	Situations occur in which I am made to feel incapable.	1	2	3	4	5	6	7
10.	I feel other people dislike me.	1	2	3	4	5	6	7
11.	There are times when I am told things that make me feel incompetent.	1	2	3	4	5	6	7
12.	I feel that other people are envious when I achieve success.	1	2	3	4	5	6	7

Modified version of Performance Enhancement Attitude Scale (Petróczi, & Aidman, 2009)

The following items ask about your opinion about performance enhancement drugs. Remember, there are no right or wrong answers; please be honest. Please indicate how much you agree or disagree with each statement.							
		Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree
1.	The risks related to doping are exaggerated.	1	2	3	4	5	6
2.	Athletes who take recreational drugs, use them because they help them in sport situations.	1	2	3	4	5	6
3.	Doping is an unavoidable part of the competitive sport.	1	2	3	4	5	6
4.	Athletes often lose time due to injuries and drugs can help to make up the lost time.	1	2	3	4	5	6
5.	There is no difference between drugs, fiberglass poles, and speedy swimsuits that are all used to enhance performance.	1	2	3	4	5	6

APPENDIX 7: Chapter 5 Questionnaire Items

Demographic Questionnaire

Demographic questionnaire
What is your coaching qualification (e.g., UKCC level 1)?
D.O.B. (MM/DD/YY)
Circle your gender: *male* *female*
What is the main sport are you currently coaching?
What is the level of sport you are currently coaching (e.g., recreational, regional)?
How many years have you been involved in coaching (total)?
How many years have you been coaching the current sport?
How many years have you been coaching your current team?
How many hours per week do you spend coaching?
How would you describe yourself? White British ☐ White Irish ☐ Other White ☐ Asian or Asian British: Indian ☐ Asian or Asian British: Pakistani ☐ Asian or Asian British: Bangladeshi ☐ Asian or Asian British: Chinese ☐ Asian or Asian British: Other Asian ☐ Black or Black British ☐ Mixed ☐ Other Ethnic Group *(please specify)* ☐

Narcissistic Personality Inventory (NPI-40; Raskin & Terry, 1988)

Read each pair of statements and then choose the one that is closer to your own feelings and beliefs. Indicate your answer by circling the corresponding number in bold "0" or "1" to the right of each item. You should choose only one answer per row. Please do not skip any items.				
1.	I have a natural talent for influencing people.	**0**	I am not good at influencing people.	**1**
2.	Modesty doesn't become me.	**0**	I am essentially a modest person.	**1**
3.	I would do almost anything on a dare.	**0**	I tend to be a fairly cautious person.	**1**
4.	When people compliment me I sometimes get embarrassed.	**0**	I know that I am good because everybody keeps telling me so.	**1**
5.	The thought of ruling the world frightens the hell out of me.	**0**	If I ruled the world it would be a much better place.	**1**
6.	I can usually talk my way out of anything.	**0**	I try to accept the consequences of my behavior.	**1**
7.	I prefer to blend in with the crowd.	**0**	I like to be the center of attention.	**1**
8.	I will be a success.	**0**	I am not too concerned about success.	**1**
9.	I am no better or no worse than most people.	**0**	I think I am a special person.	**1**
10.	I am not sure if I would make a good leader.	**0**	I see myself as a good leader.	**1**
11.	I am assertive.	**0**	I wish I were more assertive.	**1**
12.	I like having authority over people.	**0**	I don't mind following orders.	**1**
13.	I find it easy to manipulate people.	**0**	I don't like it when I find myself manipulating people.	**1**
14.	I insist upon getting the respect that is due me.	**0**	I usually get the respect that I deserve.	**1**
15.	I don't particularly like to show off my body.	**0**	I like to display my body.	**1**
16.	I can read people like a book.	**0**	People are sometimes hard to understand.	**1**
17.	If I feel competent I am willing to take responsibility for making decisions.	**0**	I like to take responsibility for making decisions.	**1**
18.	I just want to be reasonably happy.	**0**	I want to amount to something in the eyes of the world.	**1**
19.	My body is nothing special.	**0**	I like to look at my body.	**1**
20	I try not to be a show off.	**0**	I am apt to show off if I get the chance.	**1**
21.	I always know what I am doing.	**0**	Sometimes I am not sure of what I am doing.	**1**
22.	I sometimes depend on people to get things done.	**0**	I rarely depend on anyone else to get things done.	**1**
23.	Sometimes I tell good stories.	**0**	Everybody likes to hear my stories.	**1**

Narcissistic Personality Inventory (Continued)

Read each pair of statements and then choose the one that is closer to your own feelings and beliefs. Indicate your answer by circling the corresponding number in bold "0" or "1" to the right of each item. You should choose only one answer per row. Please do not skip any items				
24.	I expect a great deal from other people.	**0**	I like to do things for other people.	**1**
25.	I will never be satisfied until I get all that I deserve.	**0**	I take my satisfactions as they come.	**1**
26.	Compliments embarrass me.	**0**	I like to be complimented.	**1**
27.	I have a strong will to power.	**0**	Power for its own sake doesn't interest me.	**1**
28.	I don't very much care about new fads and fashions.	**0**	I like to start new fads and fashions.	**1**
29.	I like to look at myself in the mirror.	**0**	I am not particularly interested in looking at myself in the mirror.	**1**
30.	I really like to be the center of attention.	**0**	It makes me uncomfortable to be the center of attention.	**1**
31.	I can live my life in any way I want to.	**0**	People can't always live their lives in terms of what they want.	**1**
32.	Being an authority doesn't mean that much to me.	**0**	People always seem to recognize my authority.	**1**
33.	I would prefer to be a leader.	**0**	It makes little difference to me whether I am a leader or not.	**1**
34.	I am going to be a great person.	**0**	I hope I am going to be successful.	**1**
35.	People sometimes believe what I tell them.	**0**	I can make anybody believe anything I want them to.	**1**
36.	I am a born leader.	**0**	Leadership is a quality that takes a long time to develop.	**1**
37.	I wish somebody would someday write my biography.	**0**	I don't like people to pry into my life for any reason.	**1**
38.	I get upset when people don't notice how I look when I go out in public.	**0**	I don't mind blending into the crowd when I go out in public.	**1**
39.	I am more capable than other people.	**0**	There is a lot that I can learn from other people.	**1**
40.	I am much like everybody else.	**0**	I am an extraordinary person.	**1**

Modified version of Controlling Coach Behaviors Scale (CCBS; Bartholomew, Ntoumanis, & Thøgersen-Ntoumani, 2010)

The following statements relate to your general experiences as a coach. Every coach has a different style and no one style is necessarily better than another. Please indicate how much you agree or disagree with each statement.								
		Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Moderately Agree	Strongly Agree
1.	I am less friendly with athletes if they don't make the effort to see things my way.	1	2	3	4	5	6	7
2.	I shout at athletes in front of others to make them do certain things.	1	2	3	4	5	6	7
3.	I only use rewards/praise so that athletes stay focused on tasks during training.	1	2	3	4	5	6	7
4.	I am less supportive of athletes when they are not training and competing well.	1	2	3	4	5	6	7
5.	I try to control what athletes do during their free time.	1	2	3	4	5	6	7
6.	I threaten to punish athletes to keep them in line during training.	1	2	3	4	5	6	7
7.	I try to motivate athletes by promising to reward them if they do well.	1	2	3	4	5	6	7
8.	I pay less attention to athletes if they have displeased me.	1	2	3	4	5	6	7
9.	I intimidate athletes into doing the things I want them to do.	1	2	3	4	5	6	7
10.	I try to interfere in aspects of athletes' life outside of their sport.	1	2	3	4	5	6	7
11.	I only use rewards/praise so that athletes complete all the tasks I set during training.	1	2	3	4	5	6	7
12.	I am less accepting of athletes if they have disappointed me.	1	2	3	4	5	6	7
13.	I embarrass athletes in front of others if they do not do the things I want them to do.	1	2	3	4	5	6	7
14.	I only use rewards/praise to make athletes train harder.	1	2	3	4	5	6	7
15.	I expect athletes' whole life to centre on their sport participation.	1	2	3	4	5	6	7

Modified version of Effectiveness and Normalcy Beliefs about Controlling Interpersonal Style (Reeve et al., 2014)

The following statements relate to your beliefs about <u>how effective</u> above described style to coaching (questions 1-15). Remember, there are no right or wrong answers; please be honest.								
		Extremely ineffective; it would not work at all			Neither effective nor ineffective			Extremely effective; it would certainly work
1.	How effective would this approach to coaching be in terms of motivating and engaging your athletes?	1	2	3	4	5	6	7
		No benefit at all			Neutral			A great deal of benefit
2.	If you coaches in this way how much would your athletes benefit in terms of learning and achievement?	1	2	3	4	5	6	7
The following statements relate to your beliefs about <u>how normative</u> above described style to coaching (questions 1-15). Remember, there are no right or wrong answers; please be honest.								
		No, not at all			Neutral			Yes, very much
1.	Does this approach describe what the other coaches you know and work with do as coaches?	1	2	3	4	5	6	7
		Extremely atypical, uncommon			Neutral			Extremely typical, common
2.	How typical or common is this approach to coaching for the coaches you know and work with?	1	2	3	4	5	6	7

Moral Disengagement in Sport Scale-Short (MDSS-Short, Boardley & Kavusannu, 2008)

A number of statements describing thoughts that players might have about competitive sport are listed below. Please read these statements carefully and indicate your level of agreement with each one by circling the appropriate number. Please respond honestly.							
What is your level of agreement with the following statements?	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
1. It is okay for players to lie to officials if it helps their team	1	2	3	4	5	6	7
2. Bending the rules is a way of evening things up	1	2	3	4	5	6	7
3. Shouting at an opponent is okay as long as it does not end in violent conduct	1	2	3	4	5	6	7
4. It is unfair to blame players who only play a small part in unsportsmanlike tactics used by their team	1	2	3	4	5	6	7
5. A player should not be blamed for injuring an opponent if the coach reinforces such behavior	1	2	3	4	5	6	7
6. Insults among players do not really hurt anyone	1	2	3	4	5	6	7
7. It is okay to treat badly an opponent who behaves like an animal	1	2	3	4	5	6	7
8. Players that get mistreated have usually done something to deserve it	1	2	3	4	5	6	7