

Section II

Individual Differences in Sport and Exercise Psychology

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Chapter 7

Antecedents of Need Supportive and Controlling Interpersonal Styles From a Self-Determination Theory Perspective: A Review and Implications for Sport Psychology Research

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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 (see Duda and Appleton, Chapter 18; 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. These styles are reflected in a set of distinct behaviors 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 (ie, feeling a sense of free will, volition, and choice in relation to sport participation), competence (ie, feeling one is efficacious and can meet the challenges faced in sport), and a sense of relatedness (ie, feeling socially connected to the coaches and teammates). However, when coaches actively thwart these basic needs, coaching can be considered controlling (Bartholomew, Ntoumanis, Ryan, Bosch, & Thøgersen-Ntoumani, 2011). 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 thwarting 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 behaviors and when coaches actively undermine athletes' sense of self-worth (Bartholomew, Ntoumanis, & Thøgersen-Ntoumani, 2009).

Extensive research in sport (Bartholomew et al., 2011) 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 behavior 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 synthesize 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 synthesize 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 Apr. 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* behavior OR control* behavior OR control* behavior 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 (ie, 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 (ie, autonomy support, and/or structure and/or interpersonal involvement) and/or controlling interpersonal styles, strategies, or behaviors; and (3) if the measures of need supportive and controlling interpersonal styles did not assess these variables as conceptualized by SDT (Fig. 7.1).

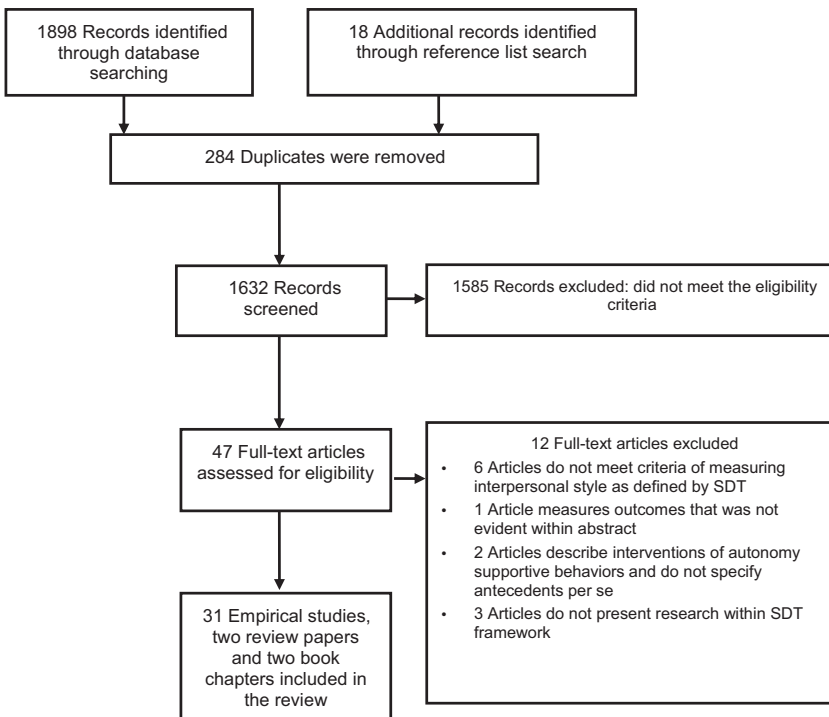


FIGURE 7.1 PRISMA flowchart describing the selection process in the systematic literature review (Moher, Liberati, Tetzlaff, & Altman, 2009). The initial database search resulted in a total of 1898 articles. After duplicates were removed ($n = 284$), manuscript titles and abstracts were screened. Articles 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.

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 (ie, published journal article, book chapter), design (eg, cross-sectional, longitudinal, experimental), role of participants (eg, coaches over athletes, parents over athletes, teachers over students, supervisors over employees, etc.), domain (ie, educational, home, sport, work, and health), antecedents tested (eg, perceived pressure from superiors, causality orientation), type of antecedent (ie, contextual or personal factors, perceptions of the others' motivation), measure of need supportive and/or controlling behaviors (eg, observation, self-report), and motivational style measured (ie, autonomy support, structure, involvement and/or control; Table 7.1). 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' behaviors and motivation, and personal factors (Fig. 7.2 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 (2002) on external pressure in the education domain.

Studies adopted different methods to measure whether the leader's behavior was need supportive and/or controlling. Most ($n = 20$) of the studies reviewed utilized questionnaires completed by individuals in positions of authority or leadership (eg, 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 behaviors 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 styl

TABLE 7.1 Description of Reviewed Studies

Study	Type of publication	Type of study (design)	Role of participants	Domain	Antecedents tested	Type of antecedent	Measure of the behavior/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
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 (eg, number of hints given), subjective rating (eg, extend of teacher interest in puzzle activity), and teacher's questionnaire (eg, how much do you enjoy being a teacher)	Controlling

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 (eg, number of hints given) and subjective (eg, extend of teacher interest in the activity) rating	Controlling
Grolnick (2015)	Journal article	Cross-sectional	Parents (ie, 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
Grolnick and Apostoleris (2002)	Book chapter	Review	Parents (ie, mothers and fathers)	Home	Stress and social support, perceptions of the adolescents' "difficulty," internal pressures (eg, ego-involvement)	Contextual, perceptions of others' behaviors and motivation, and personal factors	Measured using variety of methods (eg, questionnaire, observation)	Controlling, autonomy-supportive

(Continued)

TABLE 7.1 Description of Reviewed Studies (*cont.*)

Study	Type of publication	Type of study (design)	Role of participants	Domain	Antecedents tested	Type of antecedent	Measure of the behavior/outcome predicted	Motivational style measured
Grolnick et al. (2002)	Journal article	Experimental	Parents (ie, mothers)	Home	Pressure to maximize children' performance via control-inducing statements; internal pressure (eg, ego-involvement)	Contextual, personal factors	Experimental manipulation via pressure statement measured by videotape analysis using verbal and nonverbal rating	Controlling
Grolnick et al. (1996)	Journal article	Cross-sectional	Parents (ie, mothers and fathers)	Home	Stress (eg, positive and negative life events), social support, and perceptions about adolescents' "difficulty"	Contextual, perceptions of others' behaviors and motivation	Interviews	Involvement, autonomy, support, structure

Grolnick et al. (2007)	Journal article	Experimental	Mothers and their fourth grade children	Home	Internal pressure (ie, high contingent self-worth, mind resistant to change) combined with external pressure (ie, evaluation)	Contextual, personal factors	Contextual, personal factors	Experimental manipulation via pressure statement measured by videotape analysis using verbal rating for controlling (eg, leading questions and giving answers) and autonomy supportive (eg, giving feedback and encouragement)	Controlling, autonomy-supportive
Harackiewicz and Larson (1986)	Journal article	Experimental	Undergraduate students that served as supervisors	Workplace	Administration of rewards	Contextual	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	Contextual	Self-report; Problems in Sports Questionnaire (PSQ; Amorose, 2008), modification of PCCQ (Deci et al., 1981)	Autonomy-supportive

(Continued)

TABLE 7.1 Description of Reviewed Studies (*cont.*)

Study	Type of publication	Type of study (design)	Role of participants	Domain	Antecedents tested	Type of antecedent	Measure of the behavior/outcome predicted	Motivational style measured
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
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' behaviors and motivation	Self-report; Health Care Climate Questionnaire for autonomy-supportive (HCCQ; Williams et al., 1996); Controlling Coach Behaviors Scale for controlling (CCBS; Bartholomew et al., 2010)	Autonomy-supportive and controlling
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' behaviors and motivation	Self-report; PSQ (Deci et al., 1981)	Autonomy-supportive

(Continued)

TABLE 7.1 Description of Reviewed Studies (*cont.*)

Study	Type of publication	Type of study (design)	Role of participants	Domain	Antecedents tested	Type of antecedent	Measure of the behavior/outcome predicted	Motivational style measured
Pelletier and 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' behaviors and motivation	Measured using variety of methods (eg, questionnaires, experimental manipulations)	Controlling, autonomy-supportive
Pelletier and Vallerand (1996)	Journal article	Experimental	Graduate students	Educational	Perceptions of students' self-determined and nonself-determined motivation	Perceptions of others' behaviors and motivation	Self-report and student perception; questionnaire included autonomy-supportive and controlling items developed from the SDT-based definition of those two behaviors	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
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' behaviors and motivation, and personal factors	Measured using variety of methods (eg, self-reports)	Autonomy-supportive, controlling

(Continued)

TABLE 7.1 Description of Reviewed Studies (*cont.*)

Study	Type of publication	Type of study (design)	Role of participants	Domain	Antecedents tested	Type of antecedent	Measure of the behavior/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' behaviors and motivation, and personal factors	Measured using variety of methods (eg, 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

Robertson and 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; perceptions of athletes' self-determined and nonself-determined motivation	Contextual, perceptions of others' behaviors 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 behavior: scale developed by Assor et al. (2002) measuring autonomy-supportive teaching	Autonomy-supportive

(Continued)

TABLE 7.1 Description of Reviewed Studies (*cont.*)

Study	Type of publication	Type of study (design)	Role of participants	Domain	Antecedents tested	Type of antecedent	Measure of the behavior/outcome predicted	Motivational style measured
Roth and Weinstock (2013)	Journal article	Cross-sectional	High school students, teachers	Educational	Epistemological beliefs	Personal factors	Students' perceptions of autonomy-supportive behavior: 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' behaviors and motivation	Observational study (videotape analyses) measured by observer ratings of verbal interactions of controlling and autonomy-supportive styles	Controlling, autonomy-supportive

Skinner and Belmont (1993)	Journal article	Cross-sectional	Teachers (grades 3–5)	Educational	Perceptions of students' behavioral engagement	Perceptions of others' behaviors 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 behavior, respect, choice and relevance	Involvement, structure and autonomy support
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

(Continued)

TABLE 7.1 Description of Reviewed Studies (*cont.*)

Study	Type of publication	Type of study (design)	Role of participants	Domain	Antecedents tested	Type of antecedent	Measure of the behavior/outcome predicted	Motivational style measured
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
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 (eg, positive affect, integration), ill-being (eg, 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 and Ntoumanis (2007)	Journal article	Cross-sectional	PE teachers	Educational	Perceptions of students' self-determined and nonself-determined motivation	Perceptions of others' behaviors and motivation	Self-report; Teacher as Social Context Questionnaire (TASCQ; Wellborn et al., 1988)	Autonomy-supportive, structure, involvement
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' behaviors and motivation, and personal factors	Self-report; TASCQ (Wellborn et al., 1988)	Autonomy-supportive, structure, involvement

(Continued)

TABLE 7.1 Description of Reviewed Studies (*cont.*)

Study	Type of publication	Type of study (design)	Role of participants	Domain	Antecedents tested	Type of antecedent	Measure of the behavior/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

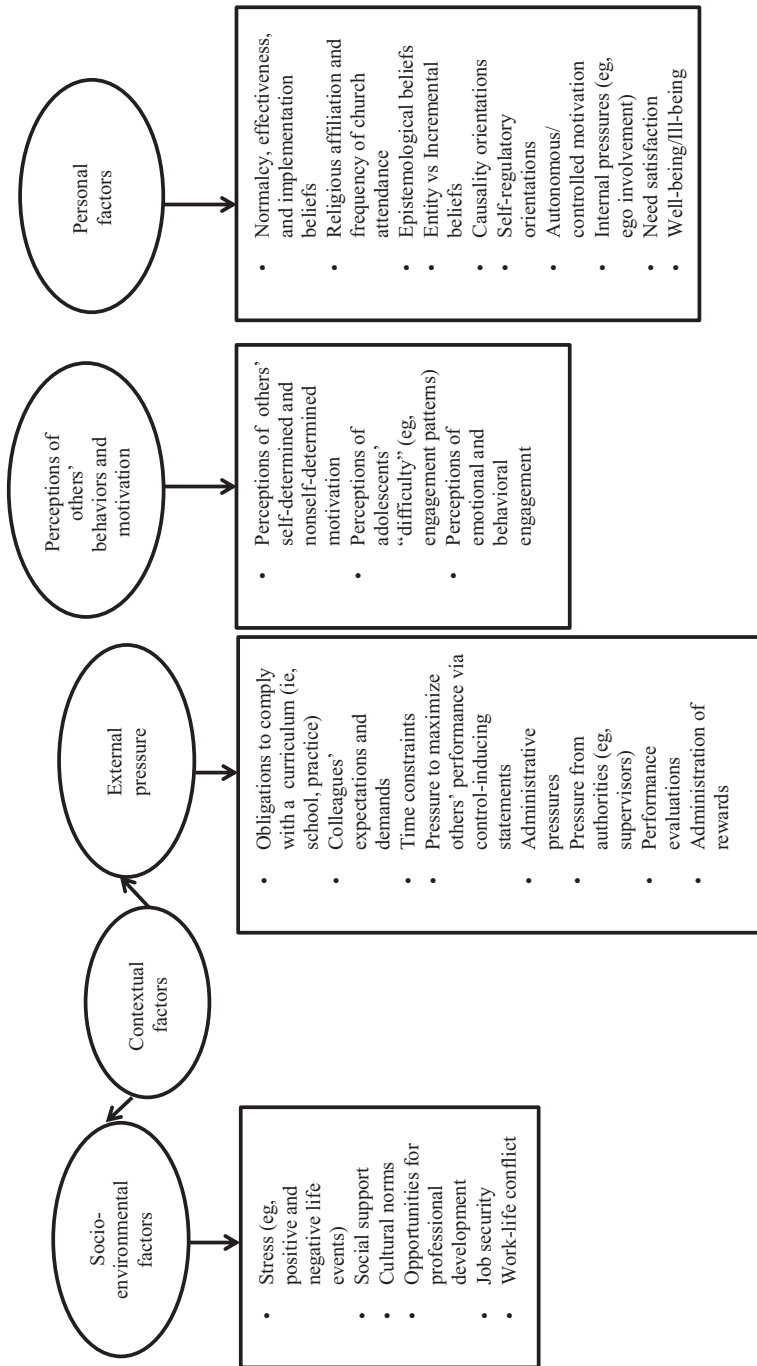


FIGURE 7.2 Summary of antecedents of controlling and need supportive behaviors identified within the SDT.

es 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 (eg, teacher) or a subordinate (eg, student). Teachers who were told they were responsible for their students performing up to the standard exhibited more controlling behaviors 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 detail 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' behaviors and motivation, and personal factors. We also present two subcategories (ie, 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 (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 (eg, negative and positive life events), and social support factors were identified as 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 (eg, negative and positive life events), and social support as predictors of parenting style. Mothers who were exposed to more negative life events (eg, 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 (ie, 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 (ie, Dutch classroom) and collectivistic cultures (ie, 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 crosscultural 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 (eg, 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 behavior 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 behaviors 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 behaviors. 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 the 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 behaviors when interacting with their athletes. Job security was not related to need thwarting and perceived controlling coach behaviors. 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. 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 the 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 behaviors. 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. 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 (eg, 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 behavior is a norm comparing to individuals in individualistic societies. 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 (eg, 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 (eg, 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, 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 (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 maximize their students' performance via control-inducing statements exhibited more controlling behaviors toward

these students (eg, criticized; 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 behaviors 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 behaviors toward their students (Deci et al., 1982; Taylor et al., 2008).

Similar findings have been reported in the parental literature (Grolnick, Gurland, DeCoursey, & Jacob, 2002). In this experimental study, external pressure toward mothers was created via control-inducing statements. Behaviors were observed (ie, videotaped) and analyzed using verbal rating for controlling (eg, mothers using leading questions and providing answers to their child) and autonomy supportive (eg, 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.

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 (ie, pressure from other coaches in terms of direct comparison), pressure associated with the practice curriculum (ie, perceived stress and impositions placed on them regarding how to run training sessions and what decisions to make about training) and administrative pressure (ie, pressure from club administration on how to run the team, select the team and fulfill 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 (eg, coach) will tend to adopt more controlling and less autonomy supportive strategies to motivate others (Reeve, 2009).

In summary, evidence suggests that external pressure (eg, performance targets from club administrators) can undermine coaches' self-determined motivation and result in coaches' using more controlling behaviors (eg, 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' BEHAVIORS AND MOTIVATION

Ten empirical studies found antecedents of leaders' interpersonal style to be their perception of other's behaviors (eg, 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, 2009; Taylor & Ntoumanis, 2007; Taylor et al., 2008). Additionally, students who were perceived as showing higher emotional and behavioral engagement in the classroom received more autonomy support, structure, and involvement behaviors 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 behaviors 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" (eg, tempered, moody, not engaged) reported providing less autonomy support and less involvement than parents who perceived their adolescents as less difficult (eg, 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 behavior 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 (ie, 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 (eg, 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 (ie, home educators) reported a preference toward 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 (ie, beliefs about perception of knowledge characteristics and nature of knowing) as antecedents of interpersonal styles. In a study with high school teachers, it was found that students of teachers who were more absolute and objective (ie, 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 (ie, believed knowledge is complex and changing and permit 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 behaviors.

Leroy et al. (2007) reported that the belief that academic abilities cannot change despite students' efforts (ie, entity belief) was negatively related to teachers' perception of autonomy supportive strategies. The belief that academic abilities can be improved through students' own efforts (ie, 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, 1985). Individuals with an autonomous causality orientation pursue volitional choices and experience higher self-determination and need satisfaction (Deci & Ryan, 1985; Taylor et al., 2008). Conversely, individuals with controlled causality orientation experience pressured behaviors, lower self-determination, and

need thwarting (Deci & Ryan, 1985; Van den Berghe et al., 2013). Individuals with an impersonal causality orientation tend to experience inefficient behavior (Deci & Ryan, 1985). Overall, the reviewed studies found that causality orientations were significantly associated with interpersonal styles. Teachers with a controlled causality orientation embraced more controlling behaviors, whereas teachers with an autonomous causality orientation utilized more autonomy supportive behaviors (Reeve, 1998, 2002, 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 behaviors (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 behaviors (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 (ie, 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 behaviors 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 behaviors. 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 behaviors. 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 toward their children. Furthermore, parents with a mindset resistant to changes and those experiencing high contingent self-esteem also exhibited more controlling behaviors (Grolnick et al., 2007). The results suggest that parents who are ego-involved may utilize controlling behaviors 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 behaviors (Bartholomew et al., 2009). Furthermore, in a recent study, Grolnick (2015) found that autonomous motivation toward involvement in child's schooling (eg, 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 the coaches' need satisfaction and well-being and their use of autonomy supportive behaviors. These findings were extended in a longitudinal study by Stebbings et al. (2015) in which the coaches' psychological well-being (ie, 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 internalized motives, they are more likely to provide their athletes with opportunities to make choices or feel volitional, compared to coaches who are less excited and engaged. Conversely, the study revealed that coaches who experienced psychological ill-being (ie, negative affect) reported being more controlling. Thus, when coaches are more distressed (eg, experiencing negative affect), they may be more likely to provide negative feedback and intimidate their athlete, compared to coaches who are not distressed.

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 behaviors. Personal factors have predominantly been examined in the parental and education literatures. Coaches' beliefs about need supportive and controlling behaviors (eg, in terms of how effective, normative and easy to implement they are) could predict the use of such behaviors (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 behaviors 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 the 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 (ie, entity belief) 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 (ie, incremental belief) 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 behaviors.

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 behaviors; 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 (Stebbing 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 (ie, narcissism) as predictors of autonomy supportive and controlling coach behaviors (Matosic et al., in press). 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 (Matosic et al., in press). 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" (ie, 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 behaviors (Paulhus & Williams, 2002). Furthermore, it would be interesting to investigate the possibility of constructs from the Five-Factor model of personality (ie, extraversion, agreeableness, conscientiousness, neuroticism, openness to experience) as predictors of need supportive and controlling behaviors. 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 behaviors (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 behaviors 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 behaviors (Sarrazin et al., 2006).

In summary, a number of antecedents of controlling and need supportive behaviors have been identified in the SDT literature across various life domains (eg, education, work, parenting, sport, health). This review has identified that these antecedents fall into three main categories, namely contextual factors, perceptions of subordinate's behaviors and motivation, and personal factors. The applicability of some of these antecedents to the coaches' interpersonal styles are 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 interpersonal

styles 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 will foster higher well-being and performance, both for their athletes and for the coaches themselves.

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