Do perceived autonomy-supportive and controlling teaching relate to physical education students' motivational experiences through unique pathways? Distinguishing between the bright and dark side of motivation

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ABSTRACT

Objectives: Grounded in Self-Determination Theory (SDT), this study examined the mediating role of students' experiences of need satisfaction and need frustration in associations between perceived teaching style and students' motivation and oppositional defiance in the context of physical education. Specifically, we tested an integrated model including both a 'bright' path from perceived autonomy-supportive teaching through need satisfaction toward autonomous motivation and a 'dark' pathway from perceived controlling teaching through need frustration toward controlled motivation, amotivation, and oppositional defiance.
Design: Cross-sectional study.
Methods: To investigate the proposed paths structural equation modeling was used in a sample of 499 secondary school students (44% boys, $M_{age} = 15.77 \pm 1.16$).
Results: We found that perceived autonomy-supportive and controlling teaching, as well as need satisfaction and need frustration, constitute different constructs relating distinctively to motivational outcomes. Consistent with the notion of a bright and dark path, perceived autonomy support was related primarily to autonomous motivation, with need satisfaction mediating this association, whereas perceived controlling teaching was related primarily to controlled motivation and amotivation, through need frustration. Perceived controlling teaching also displayed a direct and unique relationship with oppositional defiance.
Conclusions: To more accurately capture the detrimental effects of controlling teaching, this teaching dimension along with its consequences in terms of need frustration and motivational outcomes needs to be studied in its own right. It is also discussed that effective teacher training may raise awareness among teachers about the motivational risks associated with controlling practices.

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Teachers can vary substantially in the way they begin a physical education (PE) lesson. Some teachers focus primarily on sparking enthusiasm in their students and begin by explaining the relevance of the lesson or by soliciting students' own experiences with the topic of the lesson. In contrast, other teachers focus on disciplinary matters first, and when students do not meet expectations, they rely on guilt-induction and criticism to correct students. Whereas the former teachers predominantly rely on autonomy-supportive teaching practices, the latter teachers make use of more controlling teaching practices.

A substantial body of research grounded in Self-Determination Theory (SDT, Deci & Ryan, 2000), a well-investigated macro-theory on human motivation, indicates that an autonomy-supportive teaching style catalyzes a 'bright' pathway toward more optimal functioning because an autonomy-supportive teaching style nurtures students' basic psychological needs for relatedness, competence, and autonomy (e.g., Filak & Sheldon, 2008; Jang, Kim, & Reeve, 2012). Apart from this bright pathway, SDT researchers have increasingly argued for the existence of a separate 'dark'

pathway activated by controlling socialization (Ryan & Deci, 2000b; Vansteenkiste & Ryan, 2013) and experiences of need frustration (e.g., Bartholomew, Ntoumanis, Ryan, Bosh, & Thøgersen-Ntoumani, 2011; Bartholomew, Ntoumanis, Ryan, & Thøgersen-Ntoumani, 2011). If this dark pathway would be elicited, it would have unique predictive validity for suboptimal or even maladaptive motivational outcomes, including controlled motivation, amotivation, and oppositional defiance. Support for the existence of a specific dark pathway was obtained in the domains of sports (Bartholomew, Ntoumanis, Ryan, Bosch, et al, 2011; Stebbings, Taylor, Spray, & Ntoumanis, 2012), work (Gillet, Fouquereau, Forst, Brunault, & Colombat, 2012), and health (Verstuyf, Vansteenkiste, Soenens, Boone, & Mouratidis, 2013). However, few studies in the educational literature have examined the dark pathways involved in students' motivation (De Meyer et al., 2014). The present study aimed to fill this gap by investigating a theoretically driven model involving a bright path from perceived autonomy support via need satisfaction to optimal motivational functioning and a dark pathway from perceived controlling teaching via need frustration to maladaptive motivational dynamics in the context of PE.

Autonomy-supportive and controlling teaching

Autonomy-supportive teachers attempt to identify, develop, and nurture students' interests (Reeve, 2009). They can do so by relying on a variety of strategies, including soliciting the students' interests and points of view, using inviting language (e.g., Ryan, 1982), offering meaningful choices (e.g., Prusak, Treasure, Darst, & Pangrazi, 2004), and creating opportunities for initiative taking (e.g., Reeve & Jang, 2006). In contrast, controlling teaching involves the use of pressuring tactics to make students think, feel, or behave in a teacher-prescribed way, thereby bypassing the students' viewpoints (Reeve, 2009). Controlling teaching can manifest in at least two different ways (Soenens & Vansteenkiste, 2010). First, teachers can rely on externally controlling tactics that typically involve the use of relatively overt and bluntly controlling strategies, such as punishments, yelling, and the use of controlling language including statements such as 'you have to' (e.g., Assor, Kaplan, Kanat-Maymon, & Roth, 2005; Reeve & Jang, 2006). Second, teachers make use of internally controlling tactics that sometimes manifest in relatively subtler and less directly observable ways. For instance, teachers can appeal to students' feelings of guilt, shame, or anxiety and they can display an orientation of contingent regard, where their involvement in the students' activities and display of appreciation covaries with the students' performance and ability to meet the teacher's expectations (e.g., Soenens, Sierens, Vansteenkiste, Dochy, & Goossens, 2012).

Whereas autonomy-supportive teaching has been found to relate to students' need satisfaction, high-quality motivation, and positive course-related outcomes in a number of studies both in education generally (e.g., Jang, Reeve, Ryan, & Kim, 2009) and in PE in particular (e.g., Taylor, Ntoumanis, Standage, & Spray, 2010), the concept of controlling teaching has been studied less frequently in its own right. In most studies in which both teaching dimensions were assessed, they were subtracted from each other to yield an aggregate measure of autonomy-supportive versus controlling teaching (e.g., Jang et al., 2009). Herein we argue that it is important to consider the distinct contribution of both teaching dimensions because an absence of autonomy support would not necessarily imply the presence of controlling teaching. Teachers who do not actively promote volitional functioning (e.g., by providing a rationale for the activity at hand or by building in choices) do not necessarily engage in controlling tactics. Teachers can also be relatively uninvolved or can use a relatively neutral style. Further,

we argue that both teaching dimensions may each have relatively unique and differential associations with adaptive and maladaptive types of student motivation. According to SDT, these differential associations would be accounted for by the differential mediating role of experiences of, respectively, need satisfaction and need frustration.

Need satisfaction and need frustration

The psychological needs for autonomy, competence, and relatedness are at the heart of SDT and are considered essential to understand how teaching behaviors relate to students' type of motivation (Reeve & Jang, 2006; Ryan & Deci, 2000a). The need for autonomy refers to the experience of being the initiator of one's actions and to a sense of psychological freedom when engaging in an activity (Deci & Ryan, 2000). The need for competence refers to the feeling of being effective and to the experience of confidence in achieving desired outcomes (Skinner & Belmont, 1993). The need for relatedness refers to experiences of positive and mutually satisfying relationships, characterized by a sense of closeness and trust (Ryan & Deci, 2000a). Much like an absence of teacher autonomy support does not necessarily entail the presence of a controlling style, it is argued increasingly in SDT that need frustration is distinct from an absence of need satisfaction (Bartholomew, Ntoumanis, Ryan, Bosch, et al, 2011; Bartholomew, Ntoumanis, Ryan, & Thøgersen-Ntoumani, 2011; Vansteenkiste & Ryan, 2013). When frustrated, the needs would manifest in feelings of pressure (autonomy need frustration), inferiority and failure (competence need frustration), and loneliness and alienation (relatedness need frustration). We note that whereas Bartholomew, Ntoumanis, Ryan, Bosch, et al (2011) and Bartholomew, Ntoumanis, Ryan, and Thøgersen-Ntoumani (2011) used the term need thwarting to reflect students' personal feelings, we prefer, consistent with other work (e.g., De Meyer et al., 2014; Vansteenkiste & Ryan, 2013), to use the term need frustration. This is because the term need frustration more closely reflects students' personal experiences (in the same way as need satisfaction does), whereas the term need thwarting is used in reference to contextual features that undermine students needs.

The distinction between need satisfaction and need frustration is said to be important because both processes would have differential antecedents and outcomes (Vansteenkiste & Ryan, 2013). Specifically, teacher autonomy support would be particularly important for fostering experiences of need satisfaction (Ryan & Deci, 2000b). An autonomy-supportive teacher would, for instance, displays a sincere interest in the way students dealt with an exercise and asks them whether they need any additional help. In such a situation, students probably feel they a have a say in how to proceed (autonomy satisfaction), are perhaps more likely to feel more confident to improve their skills (competence satisfaction), and feel understood by their teacher (relatedness satisfaction). For need frustration to occur, teachers would not simply have to be low on autonomy support but would engage in an actively controlling style. To illustrate, it is not because students experience few opportunities for choice (low autonomy need satisfaction) that they feel pressured to engage in activities against their will (autonomy need frustration). It is especially when teachers engage in controlling behaviors that students may feel pressured to change their behavior (autonomy frustration), may start to doubt their capabilities (competence frustration), and may feel rejected and disliked by the teacher (relatedness frustration). Consistent with this reasoning, Bartholomew, Ntoumanis, Ryan, Bosch, et al (2011) showed that while autonomy-supportive coaching was related more closely to athletes' experiences of need satisfaction, controlling coaching was related primarily to athletes' experiences of need