

Commentary

Developing a Motivationally-Supportive Environment to Promote Children' Physical Activity and Health in Youth Sports During the COVID-19 Pandemic

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Despite the extensive evidence of the health benefits of regular physical activity (United States Department of Health and Human Services [USDHHS], 2018), the majority of school-aged children do not meet physical activity guidelines, and the prevalence of overweight and obesity has been increasing in this age group (Ogden et al., 2016; Zhang et al., 2020). Given the fact that the physical activity behaviors children developed during their childhood have a long-term impact on their lifelong physical activity habits and healthy development, the increased levels of sedentary behavior and obesity call for immediate actions, especially during the coronavirus disease 2019 (COVID-19) pandemic (Sallis et al., 2020).

The COVID-19 pandemic can lead to mental health problems such as acute stress disorder and post-traumatic stress disorder (PTSD), as well as other physical health problems such as obesity and a sedentary lifestyle (Margaritis et al., 2020). Exposure to this traumatic COVID-19 pandemic especially impacts health and behavioral outcomes for school-aged children (Rundle et al., 2020). Thus, youth sport programs should provide favorable environments that introduce school-aged children to beneficial lifestyle behaviors and encourage them to engage in regular physical activity with appropriate social distancing (Chen et al., 2020). Furthermore, positive motivation in youth sport programs could prompt children to adopt physically active and healthy lifestyles as adults (Chen et al., 2020; Gu & Zhang, 2016; Shen et al., 2020).

Despite the assertion that youth sport programs can play an important role in the promotion of children's physical activity and health-related outcomes (i.e., physical health, mental health, social health, and cognitive health), to date scholars and researchers have not systematically investigated the environmental and psychosocial factors that influence physical activity and health-related outcomes within youth sport settings during the COVID-19 pandemic (Moore et al., 2020). To encourage school-aged children to adopt a healthy and

physically active lifestyle during the COVID-19 pandemic (Gu et al., 2018; Sallis et al., 2020), a clear understanding of the environmental and psychosocial factors that support children's motivation becomes an important issue for promotion of physical activity and health-related outcomes such as health-related physical fitness, cognition, quality of life, and well-being (Gu et al., 2012).

Self-determination theory (SDT; Deci & Ryan, 1991; Ryan & Deci, 2000; Ryan et al., 2007) is a promising theoretical framework that is being used to explain children's physical activity motivation and behavior. Deci and Ryan (1991, 1985) proposed a self-determination continuum, ranging from intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation, and amotivation. Three innate psychological needs for competence, autonomy, and relatedness are key concepts within SDT to understand the regulation of behavior (Deci & Ryan, 2000). These three psychological needs have been combined into a composite variable named *basic psychological needs* (Deci, Ryan, & Williams, 1996; Ryan & Deci, 2002). According to SDT, fulfilling these basic psychological needs is the mechanism through which children move toward more self-determined motivation and healthy behaviors.

Vallerand (1997, 2000) has outlined the antecedents and outcomes of the different types of motivation in his hierarchical model of motivation. This hierarchical model of motivation is framed in terms of supportive physical and social environment variables that affect feelings of competence, autonomy, and relatedness and, consequently different types of motivation and motivational consequences such as health-related outcomes (Vallerand, 1997, 2000; Vallerand & Losier, 1999). That is, satisfying the basic psychological needs for competence, autonomy, and relatedness is hypothesized to mediate the relationship between perceived supportive physical and social environment factors and different types of motivation. Consequently, self-determined motivation is purported to affect physical activity and health-related outcomes (Deci

et al., 2001; Deci et al., 1996; Ryan & Deci, 2002). For instance, recent empirical evidence suggests a need-supportive environment using the SDT aspect can increase school-aged children's motor development and daily physical activity (Lee et al., 2020).

In light of the hierarchical model of motivation, the motivational sequence of “supportive environment factors→ basic psychological needs→ different types of motivation→ health-related consequences” can be widely applied to youth sport settings (Ntoumanis, 2001; Vallerand, 1997, 2000). To date, much empirical evidence has provided strong support for the utility of SDT (Chu & Zhang, 2019; Ntoumanis, 2001, 2005; Vallerand, 1997). There is, however, limited evidence of the relationships in a supportive physical and social environment (i.e., active living environments; different types and sources of social support) and physical activity and health-related outcomes through basic psychological needs (competence, autonomy, and relatedness) and different types of motivation among school-aged children during the COVID-19 pandemic. More investigation, therefore, is needed to investigate the effects of supportive environment factors on children's physical activity and health-related outcomes during the COVID-19 pandemic.

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