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Do perceived helpfulness and competition in classroom contexts moderate or mediate the association between perceived stress and socio-emotional strengths and difficulties from early to middle adolescence?



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ABSTRACT

The highly competitive educational context of modern Western societies increases students' workload and their willingness to compete with others to acquire specialized knowledge and skills that support lifelong learning, which often goes along with higher perceived stress and socio-emotional and behavioral difficulties. However, less is known about whether helpfulness and competition function as potential moderators or mediators in the association between perceived stress and socio-emotional strengths and difficulties considering potential gender differences. Based on questionnaire data from a longitudinal study with 1088 students (Time 1: $M_{age} = 13.70$, SD = 0.53; Time 2: N = 845, $M_{age} = 15.32$, SD = 0.49) in German secondary schools the results of latent moderated structural equations (LMS) showed that perceived helpfulness and competition do not function as moderators. In turn, the structural equation modeling with indirect effects showed that perceived helpfulness in class fully mediated the association between perceived stress and prosocial behavior, whereas helpfulness and competition partially mediated the association between perceived stress and problems with peers for both girls and boys from early to middle adolescence.

1. Introduction

The highly competitive educational context of Western societies requires students to learn faster and more efficiently than others from an early age and to acquire specialized knowledge and skills that support lifelong learning (OECD and Statistics Canada, 2000; Stuhlmann, 2005), which often goes along with increased levels of stress in everyday life. Unsurprisingly then, students report increasing stress levels during childhood and early adolescence (American Psychological Association, 2010; Feld & Shusterman, 2015). In fact, one third of German elementary school students reported high and sometimes chronic stress in relation to school (Deutscher Kinderschutzbund, 2012). Specific, stress-inducing factors that increase during adolescence (Grützmacher & Raufelder, 2015) include the number of hours spent on homework, perceived pressures to perform well, and achieve certain academic goals (Brown, Nobiling, Teufel, & Birch, 2011). During early and middle adolescence students are more vulnerable to varies stressors within the interpersonal, social and scholastic context such as extracurricular commitments and developmental changes that adolescence brings with it such as puberty, changing relationships with parents and challenges in peer relationships (Feld & Shusterman, 2015). This vulnerability and varies forms of perceived stress often leads to socio-

emotional and behavioral difficulties, which are complex issues affected by biological, psychological, educational and social factors. The relationship between stressors, socio-emotional strengths and difficulties and the above-mentioned factors can be seen as bidirectional as socioemotional strengths and difficulties and socio-emotional, psychological, educational and social factors also effect the amount of perceived stress. One educational and social factor, which can affect the level of perceived stress, is the classroom context, which is only one system amongst many in the lives of early adolescent students, albeit an important one (Cole, Daniels, & Visser, 2013). In school context, students not only perceive stress daily, but also helpfulness and/or competition in their stressful scholastic and social environment, which might minimize (helpfulness) or trigger (competition) the effects of perceived stress on socio-emotional and behavioral strengths and difficulties. Both aspects of social-school climate are important influence factors for stress and socio-emotional and behavioral strengths and difficulties specifically in early adolescence when peers become more essential for the developing child (Cook, Deng, & Morgano, 2007). In detail, perceived helpfulness and competition can be seen as a resource in overcoming stressful situations (Resnick et al., 1997). Perceived helpfulness in classroom context is a social buffer (moderation), while there are arguments, particularly from educational economics, that competition

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amongst students should be promoted as it may increase motivation (Kaplan & Maehr, 2007). Furthermore, positive social school climate is positively associated with socio-emotional strengths and negatively associated with socio-emotional and behavioral difficulties (Gottfredson. Gottfredson, Payne, & Gottfredson, 2005: Hoferichter & Raufelder, 2017; Ludwig, 2013). Moreover, a three-wave longitudinal study by Torsheim, Aaroe, and Wold (2003) with 767 secondary school students has shown that perceived stress at baseline predicts lower levels of perceived support 12 months later, which implies the causal precondition of mediation analysis. This finding is supported through neuroscientific research highlighting that perceived stress activates (through stress hormones, such as norepinephrine and cortisol) the amygdala-based negative perception bias (Kukolia et al., 2008). Put simply: Individuals perceiving stress tend to perceive their environment (e.g., helpfulness and competition) as more negative as it might be, which in turn can result in harmful effects on socio-emotional and behavioral outcomes (Cohen, Janicki-Deverts, & Miller, 2007). If perceived helpfulness/competition were moderators they would buffer the association between perceived stress and socio-emotional strengths and difficulties, whereas if they were mediators they would account for (partial mediators) or explain (full mediation) the association. Both statistical analyses include a third variable, which either effects the strength or direction of the predictor and outcome variables (moderation), or which accounts for the effects between those two variables (Wu & Zumbo, 2008).

According to Lazarus and Folkman (1984) stress is caused by small and relative events in everyday life. Daily hassles are defined as dynamic processes (transactions) that influence a conscientious, emotional and active individual (Schwarzer, 2000). Whether a situation or event is interpreted as stressful depends on three processes that are at the heart of Lazarus' conceptualization of stress: Primary appraisal, secondary appraisal and reappraisal (Lazarus & Folkman, 1984). During primary appraisal, the individual defines a particular event or interaction as negative, aversive, threatening or challenging for its well-being (Lazarus, 1995). During secondary appraisal, different coping possibilities are evaluated based on individual and external resources to be able to overcome the stressor. Finally, reappraisal occurs whenever an individual receives new, relevant information, which might alter his or her behavior in a specific situation (Plaumann, Busse, & Walter, 2006). However, each individual evaluates a situation differently and, consequently, a single situation is almost never universally perceived as stressful by all. Put simply, intra- and inter-individual differences persist.

During early adolescence, as educational demands and everyday scholastic hassles intensify (OECD & Statistics Canada, 2000; Stuhlmann, 2005), students may perceive more stress (Seiffge-Krenke, Aunola, & Nurmi, 2009) and experience personal/developmental(internal) and environmental (external) changes (Feld & Shusterman, 2015; McInerney & McInerney, 2006). In detail, research has shown that perceived stress is related to socio-emotional strength (i.e., prosocial behavior (Raposa, Laws, & Ansell, 2016; von Dawans, Fischbacher, Kirschbaum, Fehr, & Heinrichs, 2012)), negative emotional and behavioral states and difficulties (i.e., attention-deficit/hyperactivity disorder (ADHD) (Biedermann, 2005; Corominas-Roso et al., 2015; Molina & Pelham, 2014; Molina, Pelham, Gnagy, Thompson, & Marshal, 2007), emotional problems (Hammen, 2005; Hammen, Brennan, & Le Brocque, 2011; Iacovides, Fountoulakis, Kaprinis, & Kaprinis, 2003), misconduct and problems with peers 2001; Gottfredson et al., 2005; Sigfusdottir, (Agnew. Kristjansson, & Agnew, 2012) all of which increase during adolescence (see Pöhland & Raufelder, 2014).

Studies have also shown that girls tend to report higher levels of perceived stress (Combs, Canu, Broman-Fulks, Rocheleau, & Nieman, 2015; Feld & Shusterman, 2015), greater emotional sensitivities (Hammen, 2005) and prosocial behavior (Pursell, Laursen, Rubin, Booth-LaForce, & Rose-Krasnor, 2008) than boys. In turn, boys

generally report more symptoms of hyperactivity (Isaksson, 2014) and conduct problems (Caprara et al., 2014) than girls. However, less is known whether this association is moderated or mediated by helpfulness and competition in class as a form of secondary appraisal following Lazarus' stress model (Lazarus & Folkman, 1984). Hence, there is relatively little longitudinal research on perceived stress in large samples of adolescents (Seiffge-Krenke, 1995). The classroom climate (i.e., perceived helpfulness and competition) could be an essential starting point for school-based prevention and intervention strategies, as it is associated with students' perceived stress (Grützmacher & Raufelder, 2015; Taki, 2010) and socio-emotional and behavioral strengths and difficulties (Gottfredson et al., 2005; Ludwig, 2013). Following Lazarus' stress model, perceived helpfulness in classrooms can be regarded as a resource during secondary appraisal and might thus moderate or mediate the association between perceived stress and socio-emotional and behavioral strengths and difficulties (Grützmacher & Raufelder, 2015; Lazarus & Folkman, 1984; Resnick et al., 1997). In contrast, perceived competition in classrooms could outweigh in the abovementioned association because it is often considered as an external stressor (Kaluza, 2011; Seiffge-Krenke, 2008). Furthermore, few studies indicated that perceived competition in class increases socio-emotional and behavioral difficulties (e.g. Taki, 2010), whereas helpfulness dethese effects (e.g., Plenty, creases Östberg, Almouist. Augustine, & Modin, 2014). Gender differences in the perception of helpfulness and competition were also detected (Faulstich-Wieland, 2008; Seiffge-Krenke, 2006). For instance, girls tend to have a more cooperative-integrative behavior in class and are more willing to offer help or seek help by others whereas boys are more competitive in class (Faulstich-Wieland, 2008; Rendtorff, 2014; Seiffge-Krenke, 2006).

1.1. Current study

This study aims to shed light onto helpfulness and competition in class context as potential moderator or mediators in the association between perceived stress and socio-emotional and behavioral strengths and difficulties from early to middle adolescence. Based on the above mentioned theoretical and empirical research approaches, it was hypothesized that helpfulness and competition in class moderate (Ia) or mediate (Ib) the association between perceived stress and socio-emotional and behavioral strengths and difficulties. (II) Gender and age differences apply, such as girls tend to report more emotional problems, prosocial behavior, whereas boys show more problems with peers, conduct problems and symptoms of hyperactivity as well as older students report more socio-behavioral difficulties than girls.

2. Method

2.1. Sample and procedure

The present study is based on the data set of a two-wave longitudinal, quantitative questionnaire survey of a large sample of students from 23 secondary schools in Brandenburg, Germany who took part on a large research project examining Socio-Emotional Learning Factors (SELF-Study). The data were collected on two occasions: First in the year 2011 when participants were early adolescent students in 8th grade (N = 1088; $M_{age} = 13.70$, SD = 0.53; 54% girls) (Time 1 – T1), and second 1.5 years later (2013), when the same participants were in 9th grade (N = 845; $M_{age} = 15.32$, SD = 0.49; 55% girls) (Time 2 – T2) and thus in the middle of adolescence. This particular age group was chosen due to the fact that socio-emotional and behavioral strengths and difficulties and perceived stress tend to increase during adolescence (Pöhland & Raufelder, 2014).

Moreover, in the run-up to the survey, respondents and their parents were asked for their agreement to participate and parents, schools, and students were thoroughly informed about the voluntary nature of their participation. The data were collected via anonymous, written, classDownload English Version:

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