Growth curve modeling analysis of social and academic coping during elementary school

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ARTICLE INFO

ABSTRACT

Coping with academic and social stressors in school increases as children near the transition to middle school. Growth curve modeling analyses were used to investigate the relations of the developmental trajectories in social and academic coping in 3rd through 6th grade Israeli students ($N = 670$). The findings point to general trends in decreasing rates of growth for positive-outlook coping (focusing on ways to address the stressor) and increasing rates of growth for projective coping (blaming others for the stressor). Similar but uncorrelated trajectories in social and academic projective coping, and independent trajectories of social and academic positive coping implied domain specificity. A growth decrease in academic positive coping and increase in academic projective coping occurred concurrently with a decrease in perceived classroom mastery goal structure, pointing to the possible role of the classroom context. Growth mixture modeling indicated that most (93%) students manifested these trends.

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Research strongly highlights the social foundation of academic learning (Järvelä, Volet, & Järvenoja, 2010). Students' social-emotional skills have been shown to be important to their academic success (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). However, most research tends to focus on processes either in the academic or in the social domain (Anderman & Kaplan, 2008). As a result, little is known about the potential interdependence of processes in the social and academic domains in school. This lacuna seems particularly important with regard to coping with challenges (Caprara, Barbaranelli, Pastorelli, Bandura, & Zimbardo, 2000; Seiffge-Krenke, Aunola, & Nurmi, 2009; Skinner & Zimmer-Gemback, 2007). Do students' coping with challenges in academics relate to their coping with social challenges in school? Do students use similar strategies to cope with social stresses as they do to cope with academic difficulties? Independence versus interdependence of coping in the two domains may have different implications for supporting students' adaptive coping in school.

In the current study, we investigated the relations of developmental trajectories of students' coping with social and academic challenges in school (Kaplan, 2004; Lazarus, 1993; Zimmer-Gembeck & Skinner, 2011). Specifically, we conceptualized different possible patterns of change in students' social and academic coping as indicating flow of influence from one domain to the other, reciprocal influences, or independence, and collected and analyzed longitudinal data in search of support for one of these possible processes. Furthermore, recognizing that both students' academic coping and social coping are situated within

particular educational contexts (Seiffge-Krenke et al., 2009; Ben-Eliyahu & Bernacki, 2015), we also investigated the potential role of students' perception of their classroom's motivational climate in the patterns of change of their social and academic coping.

Academic and social coping

Coping refers to an intentional and purposeful action that individuals initiate to mobilize, direct, and manage behavior and emotion in response to events appraised as stressful (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001; Lazarus, 1993; Skinner & Wellborn, 1994; Zimmer-Gimbeck & Skinner, 2011). Over the past few decades, researchers have generated a long list of adaptive and maladaptive coping orientations, including active, support-seeking, and avoidance and distraction coping (Ayers, Sandler, West, & Roosa, 1996); problem-solving, reference to others, and nonproductive coping (Frydenberg, 1997), problem-focused versus emotion-focused coping (Lazarus & Folkman, 1984); and active, avoidance, and wishful-thinking coping styles (Zimmer-Gembeck & Locke, 2007; see also Ebata & Moos, 1991, 1994; Eisenberg, Valiente, & Sulik, 2009). Other forms of coping are defined along different dimensions, such as voluntary versus involuntary, engagement versus disengagement, and primary versus secondary control (Connor-Smith, Compas, Wadsworth, Thomsen, & Saltzman, 2000). Skinner, Edge, Altman, and Sherwood (2003); (Skinner & Zimmer-Gemback, 2007; Zimmer-Gemback & Skinner, 2011) identified 12 general categories (families) that seem to cover most of the types of coping, including problem-solving, information-seeking, helplessness, escape, self-reliance, support-

seeking, delegation, social isolation, accommodation, negotiation, submission, and opposition.

In the current study, we focused on two types of coping and their correspondent change patterns in the academic and social domains: positive coping and projective coping (Kaplan & Midgley, 1999; Tero & Connell, 1984). Positive coping and projective coping were conceptualized by Tero and Connell (1984) as two types of coping strategies with difficulty and failure in the academic domain. *Positive coping* denotes adopting a positive outlook on the stressor by a combination of problem-focused strategies and positive reframing of the situation (Tero & Connell, 1984).[1] These strategies may include behaviors such as asking the teacher for help, and reframing strategies such as telling oneself that one will do better next time (the latter being similar to re-appraisal strategies in the emotion regulation literature, Gross & James, 2008). *Projective coping*, refers to oppositional and defensive behavioral and emotional strategies that externalize the reasons for the stressor and involve blaming others and feeling angry.

In research with adolescents, positive academic coping was associated with perceptions of control over academic outcomes, positive self-concept, mastery-oriented motivational orientation, positive emotions, and achievement (Kaplan & Midgley, 1999; Mantzicopoulos, 1990). In contrast, the use of projective coping was associated with perceptions of unknown or others' control, negative emotions, and low mastery-oriented motivation.

Positive and projective coping can be applied also to the social domain, to conceptualize students' different types of coping with stresses such as verbal or physical conflicts and social rejection (Bierman, 2004; Hartup, 1983; Parker & Asher, 1987, 1993; van Lier et al., 2012). Research findings across age groups suggest that children's adoption of problem-focused and positive emotional reframing strategies is associated with adaptive pattern of social functioning and well-being (Bowker, Bukowski, Hymel, & Sippola, 2000; Clarke, 2006; Reijntjes, Stegge, & Terwogt, 2006). However, research examining patterns of change in social coping is scarce. The current study addresses this gap by investigating change in positive and projective coping in the social domain among students from 3rd through 6th grade.

Coping in childhood and adolescence

Despite the long history of research on coping, dearth of longitudinal research hinders integration of findings into a comprehensive developmental model (Skinner & Zimmer-Gembeck, 2011). Building on existing findings, Skinner and Zimmer-Gembeck (2011) pointed to apparent shifts in coping at certain developmental transitions: from infancy to toddlerhood; from toddlerhood to childhood (ages 5–7); from late childhood to early adolescence (ages 10–12); from early to middle adolescence (ages 12–16); and from middle to late adolescence (ages 16–22). These transitions reflect changes in cognitive and emotional capacities as well as different social resources for coping such as caregivers and peers. These shifts also mirror findings concerning developmental change in students' needs as they transition from late childhood into early adolescence and experience increased desire for autonomy, and relations with peers and adults outside of the family (Eccles et al., 1993). Unfortunately, these developmental changes often co-occur with an academic environmental transition, from elementary to middle-level school, that counter to emerging developmental needs and increase stress both in the academic and the social domains (Eccles & Midgley, 1989). The current study examines longitudinal trajectories of coping in the social and academic domains across the development from late childhood to early adolescence (3rd–6th grades), but within the same school environment (K-6 school).

In addition to changes across developmental stages, there are significant changes in coping *within* stages, including increases in ability to regulate emotions and to problem-solve in middle childhood and early adolescence, but also increased vulnerabilities in social relationships and in perceived threats to self-concept (Eisenberg, Fabes, & Guthrie, 1997, Eisenberg et al., 2009; Skinner & Zimmer-Gembeck, 2007). Findings from a study of 12–19 year old German adolescents (Seiffge-Krenke et al., 2009) point to an increase in active and internal coping while withdrawal coping decreased from age 12 to 19, and the use of different coping strategies in different domains. There is apparent need for more research on developmental trajectories of coping in childhood and adolescence through longitudinal studies situated within particular domains. In the current study, we investigate patterns of change in positive and projective coping strategies among pre-adolescent children in the social and academic domains within a particular school context.

Relations of coping in the academic and social domains

The interconnections between social and academic processes is fairly substantiated across a wide range of social and academic behaviors (e.g., help-seeking) and self-perceptions (e.g., academic self-efficacy) (Anderman & Kaplan, 2008; Caprara et al., 2000; Durlak et al., 2011; Fuller-Rowell & Doan, 2010; Geldhof, Little, & Hawley, 2012; Kaplan, 2004; Kindermann, 1993; Levy, Kaplan, & Patrick, 2004; Patrick, 1997; Preckel, Niepel, Schneider, & Brunner, 2013; Ryan, Hicks, & Midgley, 1997; van Lier et al., 2012; Wentzel, 1993, 2004). Additionally, there is evidence for the relations among academic processes and social processes that are not academic such as students' social self-concept, quality of friendship (Levy-Tossman, Kaplan, & Assor, 2007), intergroup relations (Kaplan, 2004), and overall sense of belonging (Anderman, 1999). These interrelations could reflect influences from the academic domain to the social domain, or visa versa, from the social domain to the academic domain (Anderman & Kaplan, 2008).

Research on the nature of learning environments suggests that the classroom's academic and social contexts are intertwined (Eccles et al., 1993; Kaplan, 2004; Patrick, 1997; Patrick, Kaplan, & Ryan, 2011). In particular, a mastery goal structure—a motivational climate that emphasizes learning, understanding, and developing knowledge and skills (Kaplan, Middleton, Urdan, & Midgley, 2002)—was found to be related to students' perceptions of the teacher as providing emotional support and academic support and emphasizing constructive student interaction and mutual respect (Patrick et al., 2011), students' positive academic coping (Kaplan & Midgley, 1999), and concurrent changes in motivation (O'Keefe, Ben-Eliyahu, & Linnenbrink-Garcia, 2012). However, there is less work on the relations of coping in the social and the academic domains. Hence, the current study assumed an exploratory approach for investigating these relations. We elaborate on our conjectures regarding these relations below.

Gender differences in coping

There is surprisingly little research investigating gender differences in coping, thus, although not central to our study, we investigated gender differences in coping. Altermatt (2007) found that adolescent girls used problem-solving, internalizing, and social support seeking coping more than boys, whereas boys tended to distance themselves and externalize more than girls when coping with academic situations. Looking at emotional regulation, female college students were found to employ re-appraisal (positive framing) of stressful situations more than males did (Gross & James, 2008). Based on these, we hypothesized that elementary school girls would also tend to report using positive-outlook coping more than boys would, while boys report relying on projective coping more than girls.

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[1] It is noteworthy that, whereas positive coping is likely to be adaptive in many situations, it is not adaptive in all situations for all individuals—for example, in certain dire situations, individuals may benefit from accepting the inevitability of the negative circumstances and cope adaptively by avoiding the situation in the future.