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Personal initiative: Developmental predictors and positive outcomes from childhood to early adolescence

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ABSTRACT

Although the effects of *personal initiative* (PI) on adults' performance and other favorable outcomes are well documented, research has only recently begun to study PI in childhood. This study aimed at examining the development of PI, its predictors, and its developmental effects from childhood to early adolescence. A total of 1,593 German children participated in a longitudinal study starting at Grades 2 to 4, with a second measurement wave two years later. Latent change score analyses revealed that 1) children differed significantly in their change scores of PI, that 2) executive functions and positive parenting predicted change scores in PI, and that 3) high initial levels and change scores in PI reduced the development of internalizing and externalizing problems and supported the development of prosocial behavior and academic competencies. These findings endorse the plasticity of PI and shed light on the active part of children in promoting their own development.

1. Introduction

Some children are agentic; they seek challenges, actively explore and shape their environment, and take initiative when others do not. Other children stay passive, heavily rely on adults, and have difficulties to set goals and take action. These interindividual differences reflect differences in children's *personal initiative* (PI). The construct of PI originates from organizational behavior research (Frese, Fay, Hilburger, Leng, & Tag, 1997), but recently comes into focus in developmental and educational research as well (Wollny, Fay, & Urbach, 2016). PI depicts the behavioral tendency to act in a self-starting, proactive, and persistent way (e.g., Frese & Fay, 2001). Self-starting implies that children set goals that are not explicitly given and go beyond what is expected. Proactive implies that they adopt a long-term perspective, anticipate problems, and work towards future opportunities. Persistent implies that they actively face challenges and do not give up when pursuing a goal.

Accordingly, PI represents a construct of proactive self-regulation. It differs from other constructs of self-regulation because it refers explicitly and exclusively to behavior that can be categorized as *self-starting* and *proactive*. Other constructs of self-regulation, such as self-control, help individuals to adapt to their environment and, in this way, to increase the person-environment fit (e.g., Tangney, Baumeister, & Boone, 2004). In contrast, PI means not to adapt to the environment, but to actively change it (e.g., Frese & Fay, 2001; Wollny et al., 2016). Thus, PI contrasts with "a passive approach, which is characterized by doing what one is told to do… and reacting to environmental demands" (Fay & Frese, 2001, p. 97). PI means to take action. Therefore, it is aligned with an action-theoretical perspective which proposes that children are active producers of their own environment. According to this perspective, children also pursue their own goals (e.g., Brandtstädter, 2006). In this vein, agency and goal-directed behavior are assumed to be critical foundations of well-being and positive development (e.g., Bradley, 2013; Gestsdottir & Lerner, 2008). Consequently, PI constitutes an interesting new factor that might promote children's individual development and even reduce the effects of developmental risk factors.

However, despite the potential relevance of PI for children, little is known about PI in a developmental context. First, research on how PI develops during childhood is lacking. The first aim of this study was, therefore, to examine the developmental course of PI over a two-year time period with children ranging from Grades 2 to 4 at Time 1 and Grades 4 to 6 at Time 2. Second, little is known about factors that facilitate the development of children's PI. Therefore, the second aim of this study was to examine the predictive role of both executive functions and positive parenting in the development of PI. And third, some evidence suggests a positive relation between PI and indicators of work-related well-being (e.g., job satisfaction) and occupational development in adults (e.g., Fay & Frese, 2001; Tornau & Frese, 2013, 2015). However, there is only limited knowledge about how PI affects well-being and development in children (Wollny et al., 2016). The third aim of this study was therefore to examine potentially positive effects of PI on children's socio-emotional and academic development. Findings of this study should extend the present knowledge on the plasticity of PI in

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childhood, shed light on the role of PI in children's developmental courses, and provide useful information for developmental interventions and preventions.

1.1. The development of personal initiative

From childhood to early adolescence, children develop the self-regulatory basis for complex metacognitive processes, such as goal-setting and planning ahead (e.g., Best & Miller, 2010; Bronson, 2000; Schneider, 2010). These skills, in turn, represent the cognitive foundations of PI (Frese & Fay, 2001). For example, the prefrontal cortex undergoes substantial changes during that time and forms the basis for increased self-direction and autonomy (e.g., Blakemore & Choudhury, 2006). Executive functions become more sophisticated and enable goal-directed behavior (e.g., Best & Miller, 2010). Children and young adolescents increasingly understand their own thought processes and develop more fine-grained strategies to reach their goals (e.g., Demetriou, 2000; Schneider, 2010). In line with this, they also experience a higher degree of responsibility and autonomy, rely less on their parents, and start to make their own decisions (e.g., Steinberg & Morris, 2001). All these developmental processes should enhance the development of PI from childhood to early adolescence.

However, despite these developmental processes, previous studies suggest that PI exhibits a stable or declining trend during that time. Wollny et al. (2016) found no relation between age and teacher ratings of PI in a sample of 9 to 18-year old students. In addition, goal-directed behavior was observed to stay stable or even to decline from childhood to early adolescence (e.g., Bowers et al., 2011; Gestsdóttir & Lerner, 2007). Thus, while theoretical considerations suggest an increase in PI, empirical evidence speaks against such a trend.

Due to this inconsistency in the literature, we sought to examine whether we can identify a developmental trend of PI from childhood to early adolescence. Research on the development of self-regulation relies to a large extent on changes in rank-order over time, while paying less attention to the fact that single individuals might show very different developmental trajectories (e.g., King, Lengua, & Monahan, 2013). However, there is reason to believe that PI is affected by a highly complex, individual interplay of motivational, cognitive, and environmental factors (e.g., Frese & Fay, 2001). As a consequence, PI should optimally be studied by taking interindividual differences in intraindividual development into account. To this end, we applied a latent change score approach and investigated whether PI demonstrates a general time trend over time or whether children show highly variant developmental courses in PI.

1.2. Executive functions and positive parenting as predictors of change in personal initiative

According to Ryan and Deci (2006), human autonomous functioning builds on fundamental executive functions and is influenced by an individual's social environment. Because PI represents an example of autonomous behavior, we expected that executive functions and positive parenting are predictors of children's development in PI.

1.2.1. The role of executive functions

Executive function is an umbrella term summarizing cognitive top-down processes that are necessary for the self-regulation of thoughts and behavior (Lyons & Zelazo, 2011). Previous factor analytic work suggests three core processes of executive functions: mental set shifting (i.e., the ability to flexibly shift attention), updating/working memory (i.e., the ability to maintain and update information), and inhibition (i.e., the ability to inhibit a dominant impulse; Miyake, Friedman, Emerson, Witzki, & Howerter, 2000). These three components often form a unitary construct in early childhood (e.g., Friedman, Miyake, Robinson, & Hewitt, 2011) but tend to become more differentiated with increasing age (e.g., Huizinga, Dolan, & van der Molen, 2006; Lehto, Juujärvi, Kooistra, & Pulkkinen, 2003). Despite this trend, we decided to model executive functions as a unitary construct because we assumed that it is their shared variance that builds the foundation of goal-directed behavior as involved in PI (Miyake & Friedman, 2012).

Researchers emphasized that executive functions represent a key determinant of intentional and autonomous behavior (e.g., Gestsdottir & Lerner, 2008; Ryan & Deci, 2006). Likewise, executive functions should predict the development in PI. First of all, PI requires active goal-setting and the redefinition of goals (Frese & Fay, 2001). Working memory helps to hold these goals in mind and to protect these goals from distractors and competing goals (Hofmann, Schmeichel, & Baddeley, 2012). Second, PI entails pursuing goals despite negative emotions and setbacks (Frese & Fay, 2001). Working memory and inhibition support the suppression of negative thoughts, affect, and impulses that might go along with pursuing a goal (Hofmann et al., 2012). And third, PI involves developing action plans and alternative back-up plans. Thus, individuals need to stay flexible in case the initial action plan is not working (Frese & Fay, 2001). Mental set shifting underlies this mental flexibility and supports the mental switching from sub- to main goals (Hofmann et al., 2012). Thus, each component of executive functions is necessary but not sufficient on its own in promoting PI. It is therefore the integration of working memory, inhibition, and mental set shifting that should enhance the development of PI. Accordingly, individuals with lesions in prefrontal areas of executive functions demonstrate a lack of initiative, planning, and persistence (e.g., Barrash, Tranel, & Anderson, 2000). Yet, direct evidence pertaining to a positive relation between executive functions and PI is missing so far.

1.2.2. The role of positive parenting

Social-cognitive and relational perspectives on human development suggest that development always occurs in a (social) context (e.g., Bandura, 1986; Overton & Lerner, 2014). In this vein, researchers postulate that caregiving interactions play a prominent role in the developmental shift from external to increasing internal control (e.g., Kopp, 1982; Schunk & Zimmerman, 1997). Among these caregiving interactions, positive parenting is one well-studied factor contributing to the development of self-regulatory skills. Positive parenting represents a broad concept encompassing parental warmth, support, appropriate discipline, and involvement in children's activities (e.g., Morrill, Hawrilenko, & Córdova, 2016). In contrast to harsh discipline and intrusiveness, positive parenting fosters a positive parent-child relationship and fuels children's well-being, self-regulation, and autonomy (e.g., Berger, 2011; Rodrigo, 2010). In the same vein, positive parenting should also contribute to developmental changes in PI.

In particular, positive parenting plays a major role in framing internal control and self-efficacy beliefs, which have been proposed and identified as important antecedents of PI (e.g., Frese & Fay, 2001; Frese, Garst, & Fay, 2007; Wollny et al., 2016). For example, positive parents transmit a sense of relatedness, which according to self-determination theory is thought to promote a person's self-reliance, confidence, and autonomy (Deci & Ryan, 1985). Moreover, positive feedback and modeling foster the development of self-efficacy beliefs (Bandura, 1997). In this vein, positive parents have a large impact on their children's self-efficacy and control beliefs by providing positive role models, mastery experiences, and encouraging and consistent feedback (e.g., Martin & Dowson, 2009; Schunk & Meece, 2006; Weiner, 2001). In line with this, studies suggest a close link between positive parenting and children's autonomy, self-esteem, and perceived control (e.g., Gonzalez-DeHass, Willems, & Holbein, 2005; Ryan, Stiller, & Lynch, 1994). Thus, positive parents likely promote their child's PI via their impact on their child's motivational beliefs. In support of this, positive parenting relates to agency, goal-setting, and planning behaviors in adolescents (e.g., Brody & Ge, 2001; Williams & Merten, 2014). Yet, to our best knowledge no previous study directly tested the relation between positive parenting and PI.