

Self-Regulation in Adolescence



Edited by

GABRIELE OETTINGEN

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SELF-REGULATION IN ADOLESCENCE

During the transition from childhood to adulthood, adolescents face a unique set of challenges that accompany increased independence and responsibility. This volume combines cutting-edge research in the field of adolescence and the field of motivation and self-regulation to shed new light on these challenges and the self-regulation tools that could most effectively address them. Leading scholars discuss general principles of the adolescent period across a wide variety of areas, including interpersonal relationships, health, and achievement. Their interdisciplinary approach covers perspectives from history, anthropology, and primatology, as well as numerous subdisciplines of psychology – developmental, educational, social, clinical, motivational, cognitive, and neuropsychological. *Self-Regulation in Adolescence* stresses practical applications, making it a valuable resource not only for scholars but also for adolescents and their family members, teachers, social workers, and health professionals who seek to support them. It presents useful strategies that adolescents can adopt themselves and raises important questions for future research.

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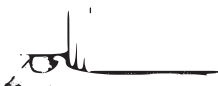
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Preface

The life period of adolescence implies a critical transition: relinquishing the more guided structure of childhood to take on new responsibilities and independence. Mastering this transition should be easier and more effective for adolescents who have acquired and readily use self-regulation tools. *Self-Regulation in Adolescence* brings together prominent researchers of two fields: the field of adolescence and the field of motivation and self-regulation. Linking these two fields of research provides new insights into how adolescents can be supported in solving the complex and demanding transition from childhood to adulthood.

Self-Regulation in Adolescence discusses which self-regulation challenges individuals face during adolescence and how they master these challenges through historical and cultural contexts, biological influences, and socialization constraints, as well as peer and educator relationships. Accordingly, the volume is not limited to discussing self-regulation in adolescence within a certain content area (e.g., achievement, interpersonal relationships, health), but deals with general principles of self-regulation and how they apply to adolescence across various life domains. Importantly, the book also presents self-regulation strategies that adolescents can acquire independently and that they can use to master challenges on their own.

The scientists contributing to this volume are at home in different disciplines. Specifically, they discuss self-regulation in adolescence from the perspectives of history, anthropology, and primatology, as well as from the perspectives of the various subdisciplines within psychology – the developmental, educational, social, clinical, motivational, cognitive, and neuropsychological. We hope that this interdisciplinary approach to self-regulation

in adolescence will raise new questions and stimulate creative research in both the field of self-regulation and the field of adolescence.

Readers will learn about what is special about self-regulation challenges in adolescence, and about the most effective self-regulation strategies that can help adolescents actually meet these challenges. The volume should be of interest to undergraduate and graduate students in psychology, as the theme of self-regulation has become central to most subfields of psychology. Moreover, with its interdisciplinary approach, it should be of interest not only to scientists in the fields of psychology but also to those in neuroscience, anthropology, medicine, sociology, behavioral economics, public policy, and law. Finally, with its emphasis on translating science into practice, *Self-Regulation in Adolescence* should be of help to the individuals studied (i.e., the adolescents themselves) and the people who intend to support adolescents in their development and growth (e.g., parents, siblings, teachers, counselors, social workers, and health care providers).

As a foundation, in Part I, four chapters introduce the topic of self-regulation. In Chapter 1, Gabriele Oettingen and Peter M. Gollwitzer explicate how self-regulation has been conceptualized in the psychology of motivation. They argue that self-regulation is needed in the face of resistance or conflict, for example, to achieve a wished for or desired future in the face of obstacles. On the basis of extensive theoretical and empirical work on self-regulation, Oettingen and Gollwitzer have developed self-regulation tools that facilitate goal attainment: mental contrasting and forming implementation intentions as well as the combination of the two strategies (MCII). These self-regulation tools can be used to produce behavior change in a cost- and time-effective way. Adolescents can easily acquire these strategies with the help of interventionists, appropriate manuals, computer programs, and mobile applications (see <http://www.woopmylife.org>).

In Chapter 2, Jacquelynne S. Eccles, Jennifer A. Fredricks, and Pieter Baay focus on interest and identity development from the perspective of Eccles's expectancy-value model of activity choice. The authors present the results of a qualitative study on adolescents' level of engagement in skill-based, time-consuming, and difficult activities and they demonstrate the importance of expectancy-value determinants for interest and long-term choice during the adolescent years. Their chapter also addresses questions of how adolescents might improve managing their many interests: how they can pursue different interests at once, select some interests over others, or switch between interests. The authors discuss why the life stage of adolescence makes these achievements so difficult, and what kind of personality characteristics (e.g., grit) may be beneficial.

In Chapter 3, Nancy Eisenberg introduces a distinction between the effortful, voluntary aspects of self-regulation and the less voluntary, more reactive control processes. Effortful control is seen as the temperamental basis of self-regulation; it comprises the ability to willfully focus and shift attention and to willfully inhibit and activate behavior. Reactive control, on the other hand, refers to automatic, non-volitional processes that lead to over- or under-controlled cognitive, emotional, and behavioral responses. Eisenberg argues that it is the relation between these two types of self-regulation processes (i.e., the reflective vs. the impulsive processes) that affects adolescents' (mal)adjustment, social competence, and academic functioning. Moreover, she highlights that it is successful self-regulation that mediates the relation of good parenting and developmental outcomes.

In Chapter 4, Koraly Pérez-Edgar focuses on the role of effortful control in adolescence. In line with Rothbart and Rueda's (2005) definition, she conceives of it as the ability to inhibit a dominant response in the service of performing a subdominant response. Rather than discussing its relation to reactive control, she describes the emergence of effortful control and its functions during adolescence (e.g., impulse control, achieving independence). She also highlights the neural and psychophysiological underpinnings of effortful control in achieving response inhibition, monitoring performance, and integrating affective and cognitive processes. Moreover, she discusses the impact of other personal attributes (e.g., being anxiety-prone) on the effectiveness of effortful control, and raises questions about the stability of effortful control over the life span.

While Part I focuses on theories of self-regulation from motivational and developmental perspectives, Part II discusses the historical and biological variables that influence how much and what type of self-regulation adolescents need. The starting chapter by Joseph F. Kett describes how the concept of youth has changed its meaning since the 17th century. He outlines what these changes mean for the lives of adolescents, including their options for personal development, the timing of certain accomplishments, the composition of peer groups, and the moral values of the society at large. Interestingly, Kett argues that the view parents and educators have of young people reflects the problems of the society in general and of the parent cohort in particular; the problems are not produced by the adolescents themselves. Kett concludes that modern times are characterized by a reduced importance of households and siblings as agents of socialization, while elevating the importance of parents, professionals, and the media.

In the subsequent chapter, Michael Rutter offers the background for understanding the challenges that self-regulation poses during the

adolescent years. He outlines which bodily changes individuals face during puberty and describes both the changes in the brain as well as changes in cognitive development during adolescence. Michael Rutter argues that during the major biological changes dimensional, multiphase causal pathways generally operate. Explicating the role of psychopathology in adolescents' personality development, he shows how respective longitudinal data can be understood from a causal mechanism perspective by integrating recent findings from genetics. He raises the question of how adolescents suffering from a mental disorder can be nudged into engaging in self-regulation, given that many of these disorders (e.g., eating disorders, use of drugs and alcohol, schizophrenia) are associated with a reluctance to acknowledge the problem. Moreover, these disorders are typically characterized by deviant thinking patterns that need to be altered before self-regulation techniques can be effectively taught and fruitfully applied.

Next, Frans B. M. de Waal's contribution focuses on the emotional control skills of nonhuman primates. He reports that the ability to regulate emotion gives primates an astounding social sophistication that covers conflicts with others, reciprocity, the distress of others, and the division of rewards. As nonhuman primates face a social world that is structured rather hierarchically, it is important for them to suppress impulses and show forgiveness, fairness, empathy, and gratitude. De Waal suggests that the social lives of apes and monkeys are sufficiently complex that effective self-regulation strategies are needed. Moreover, he rejects the assumption that emotional states are a product of human culture, language, and education. Rather, they seem to be grounded in our biology and the need to build cooperative relationships, a need humans share with other primates.

The foundations of self-regulation in adolescence are also illuminated by the emerging field of neuroscience. Therefore, in the opening chapter of Part III, Laurence Steinberg explicates a recently much discussed topic with important applied ramifications: the neural systems of reward-seeking. He looks at these systems in the context of risk-taking behavior and postulates two critical neural systems: the reward system and the cognitive-control system. He argues that middle adolescence (ages 14 to 17) is associated with higher reward-seeking behavior (reward system) in the context of relatively low impulse control (cognitive-control system). Thus the vulnerability to risk-taking during adolescence is seen as the product of these two factors (high reward-seeking and low impulse control). Steinberg supports this argument with neuropsychological findings and empirical field data on risk-taking behavior in a large sample of youth. He also suggests that adolescents' vulnerability to risky-decision making is exacerbated by the presence of

peers because they heighten the adolescents' already pronounced sensitivity to rewards even more.

The focus of Sarah-Jayne Blakemore's chapter is on social cognition and the development of the social brain – that is, the network of brain regions involved in understanding other people's minds. Blakemore sees two major changes in the brain during adolescence. First, there is a steady increase in white matter volumes in several brain regions during childhood and adolescence, which facilitates the communication between brain regions. Second, grey matter, which is at its greatest volume during childhood, decreases across adolescence; this decrease is commonly interpreted as reflecting a more efficient synaptic reorganization. These two changes in the adolescent brain facilitate cognitive and affective mentalizing (i.e., the understanding of others' thoughts and intentions as well as their emotions), which in turn explains the substantial improvements in social competence during adolescence.

Philip David Zelazo and Sabine Doebel provide a neuroscience perspective on self-regulation that explicates the nature and development of executive function – the top-down, conscious control of thought, action, and feelings. They describe a theoretical model, the Iterative Reprocessing Model, which addresses how improvements in self-reflection (based on the growth and refinement of neural networks involving anterior regions of the prefrontal cortex) enable the development of executive function. The authors offer suggestions for an integrative approach to enhancing self-regulation in adolescence that takes into account what is currently known about neural plasticity and the neurocognitive processes involved in executive function. They also suggest interventions promoting self-reflection as a promising approach to be incorporated with other strategies that maximize goal achievement.

In Part IV, the focus is on self-regulation of interpersonal relationships. The three chapters consider adolescents' relationships to their peers and parents as well as the adult world in general. Judith G. Smetana discusses age-related changes in adolescents' and parents' conceptions of the boundaries of legitimate authority. The adolescents' desires for greater autonomy over personal issues (i.e., choice of leisure activities, friends, and appearance) result in conflicts with their parents. A further issue is what and how much adolescents tell their parents about their activities, especially regarding sensitive topics such as smoking or drinking alcohol. Smetana suggests that taking a goal-conflict perspective might help illuminate the adolescents' developmental path toward successful adulthood: Adolescents strive for greater autonomy and at the same time want to maintain close

connections with their parents while parents encourage developing autonomy and at the same time seek to keep adolescents safe and accepted by their society. Such inner goal conflicts as well as those between adolescents and parents threaten everyday family life and require parents and adolescents to renegotiate their legitimate authority and personal autonomy.

Focusing on substance (ab)use in the subsequent chapter, Laurie Chassin outlines various models for understanding adolescents' drug use. These can be classified into individual difference models that see vulnerabilities in adolescents' self-regulatory dispositions (e.g., high reward sensitivity and sensation seeking, low harm avoidance, and lack of inhibitory control) versus within-person models that focus on the processes of self-regulation rather than trait-like dispositions. With respect to the latter type of models, dual process approaches have been particularly valuable: They propose that substance use results from an imbalance between automatically triggered positive associations to substance use cues and consciously controlled processes. Chassin points out that there still is a lack of research measuring these vulnerabilities and showing how the multiple underlying processes interact. She also highlights that there is a need for research studying how social contexts (e.g., parents' and peers' attitudes to drug use) affect the influence of stable personal attributes on drug use, as well as how social contexts interact (i.e., enhance or inhibit) with the underlying processes of enhanced drug use.

Finally, from an anthropological perspective, Alice Schlegel reminds us that we should not forget the impact of role models when trying to understand self-regulation. Using observational data, Schlegel argues that anti-social behavior is to be expected when boys spend too much time with their peers rather than with the male models of the older generations. From these older models adolescents can be expected to learn how to self-regulate aggression, sex, risk-taking, and impulsive behavior. Schlegel therefore advocates that adolescents should be given access to adult-based groups that incorporate adolescents for at least some of their activities (e.g., when an adult choir incorporates adolescent voices). Also, when adolescents are in peer groups, they should be given responsibilities in the adult world so that they are no longer isolated. By segregating adolescents from adults and preventing peer groups from participating in the community, adolescents are denied long-standing ways of learning self-regulation.

Part V focuses on intervention research geared toward helping adolescents master the challenges they face. Susan Nolen-Hoeksema*, Kirsten

* We fondly remember our friend and colleague Susan Nolen-Hoeksema (1959–2013).

Gilbert, and Lori M. Hilt examine how to assist adolescents in regulating the emotions elicited by negative events. The authors point out that rumination is a futile strategy for regulating such emotions. It actually exacerbates negative affect through passive self-reflection and brooding. In the long run, it even creates vulnerabilities for depression, impedes problem solving, and promotes the onset of other forms of psychopathology such as anxiety disorders, binge drinking, binge eating, self-harm, and mania. Importantly, Nolen-Hoeksema and her colleagues discuss various types of self-regulation interventions that could replace rumination as an attempt to cope with negative events: the cognitive technique of reappraisal of the critical negative event, mindfulness techniques that help people step back from and feel less controlled by their ruminative thoughts, regulation techniques that focus on effective problem solving (such as mental contrasting), and cognitive behavioral therapy that unveils rumination as nothing but a form of avoidance. The authors end their contribution with a call for more research on the processes that mediate the long-term problems with rumination as a response to negative events.

In his contribution on promoting self-regulation in youth through psychotherapy, John R. Weisz first summarizes the results of decades of psychotherapy research, concluding that the standard evidence-based treatments are less effective than commonly assumed as they often fail to adjust for the idiosyncrasies of the patients. As one way to counter these problems, Weisz suggests the use of modular treatment protocols. He introduces MATCH (a modular approach to therapy for children) and argues that it targets three forms of self-regulation: cognitive, emotional, and behavioral. Moreover, he suggests that youth psychotherapy research should try to elucidate the mechanisms of behavior change to explain why the treatment works when it does. He proposes that the search for effective therapeutic methods could be informed and enriched by a focus on self-regulation.

Taking a different approach to intervention research, James Jaccard and Nicole Levitz focus on preventive interventions that target the parents rather than the adolescents themselves. The type of intervention they propose is based on traditional theories of action, assuming that behavior change needs to be prepared by changing the determinants of underlying intentions (such as self-efficacy beliefs, the expected value of performing the critical behavior, and the respective social norms, self-concepts, and anticipated emotions). They then report a large-scale parent-based intervention that followed this approach and achieved major changes in adolescents' problem behavior, including reduced tobacco use, binge drinking, and sexually risky behavior. Jaccard and Levitz point to a shortcoming of the traditional action theories

and their conceptualization of behavior change. These theories overlook the fact that many behavioral decisions are not the result of effortful reasoning; rather, people often engage in split-second decision making. The authors discuss the memory processes on which such split-second decisions are based, and point to self-regulation strategies that adolescents can use to protect themselves from such decisions (e.g., the if-then planning strategy, the mental contrasting strategy).

In sum, *Self-Regulation in Adolescence* bridges basic research on the processes of self-regulation with developmental approaches to the study of adolescence. In an effort to provide an interdisciplinary and transformative approach, we asked authors from related fields such as anthropology, history, and primatology to offer their perspectives. Integrating diverse areas of knowledge and methodologies may help discover new and creative ways of supporting adolescents in mastering their developmental tasks during our time of rapid societal, environmental, and technological changes.

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