

# The Development of Adolescents' Emotional Regulation Ability and Its Impact Mechanism on Academic Achievement

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**Abstract:** This study aims to explore the relationship between adolescents' emotional regulation ability and academic achievement and its influencing mechanism. The study found that emotion regulation ability plays a vital role in adolescents' academic development, which indirectly promotes the improvement of academic achievement by influencing learning motivation, self-control, executive function, mental health and other aspects. Adolescents with strong emotional regulation ability can effectively manage academic pressure and test anxiety, maintain a positive learning attitude and high learning engagement, so as to improve the learning effect. In addition, the family and school environment play an important regulatory role in the development of emotion regulation ability. This study provides a theoretical basis for educational practice, emphasizing the cultivation of emotion regulation ability in the process of education, so as to promote the improvement of teenagers' academic achievement.

**Keywords:** Emotion Regulation Ability; Academic Achievement; Learning Motivation; Mental Health

## 1. Introduction

With the rapid development of society, adolescents are facing increasing academic pressure and emotional challenges. As an important factor affecting adolescents' mental health and academic achievement, emotional regulation ability has attracted more and more scholars' attention. Emotion regulation ability refers to the ability of individuals to manage and adjust emotions through certain cognitive and behavioral strategies in the process of emotion generation, experience and expression. For teenagers, this ability is not only reflected in the control of negative emotions, but also includes the maintenance and reasonable expression of positive emotions. Recent studies have shown

that there is a close relationship between emotional regulation ability and academic achievement. Teenagers often face multiple pressures from school, family and society in the process of learning, and good emotion regulation ability can help them effectively deal with these challenges, maintain positive learning motivation and attitude, and improve learning effect<sup>[1]</sup>. However, the formation of emotion regulation ability is affected by many factors, including family education, school environment, individual temperament and social and cultural background. Therefore, it is of great theoretical significance and practical value to explore the development mechanism of adolescents' emotion regulation ability and its impact on academic achievement. This study aims to explore the role of emotion regulation ability in adolescents' academic achievement, reveal its specific mechanism, and provide effective intervention strategies for educational practice, so as to help adolescents better cope with academic challenges and promote their all-round development.

## 2 Developmental Characteristics of Adolescents' Emotion Regulation Ability

### 2.1 Definition and Theoretical Basis of Adolescents' Emotion Regulation Ability

Emotion regulation ability refers to the ability of individuals to monitor, evaluate and adjust emotions through certain cognitive and behavioral strategies in the process of emotion generation, experience and expression. In the adolescent development stage, the ability of emotion regulation is not only reflected in the control of negative emotions, but also includes the maintenance and reasonable expression of positive emotions<sup>[2]</sup>. The related theories mainly come from the emotional regulation process model, social emotional learning theory and the perspective of developmental psychology. Among them, the emotion regulation process model emphasizes that individuals realize

emotion management through cognitive reappraisal, attention transfer or emotion inhibition before and after emotion generation, while the social emotion learning theory believes that emotion regulation ability is gradually acquired and developed in the process of interaction between individuals and families, schools and social environment. Because of the physiological maturity and social role changes in adolescence, their emotional experience is more complex, so the development of emotional regulation ability has become an important symbol of individual psychological growth.

## **2.2 Development Stage and Main Performance of Adolescents' Emotion Regulation Ability**

From the perspective of developmental psychology, adolescents' emotion regulation ability shows obvious stage characteristics. In early adolescence, individuals' emotions fluctuate greatly and their ability to control negative emotions is relatively weak. They often rely on external support for regulation, such as guidance from parents or teachers. After entering the middle of adolescence, with the development of cognitive ability and self-awareness, teenagers gradually learn to use cognitive reappraisal, problem solving and other strategies to actively regulate their emotions, and improve their ability to cope with learning pressure, interpersonal conflict and other situations<sup>[3]</sup>. In late adolescence, individual emotion regulation gradually tends to be stable, can more rationally understand the source of emotion, and choose appropriate regulation methods according to different situations. In this process, teenagers not only show a higher level of self-control ability, but also gradually form a more mature way of emotional expression and social adaptability.

## **2.3 Key Factors Affecting the Development of Adolescents' Emotion Regulation Ability**

The development of adolescents' emotion regulation ability is affected by many factors, including family environment, school situation and individual characteristics. First of all, family education plays a fundamental role in the ability of emotion regulation. A democratic and supportive family atmosphere helps teenagers learn to express and manage emotions, while excessive control or neglect may lead to difficulties in emotion regulation<sup>[4]</sup>. Secondly, school environment and peer relationship are

also important factors. Positive teacher-student relationship and good peer interaction can provide social support for adolescents' emotional expression and adjustment. In addition, individual temperament characteristics, cognitive level and psychological resilience will also affect the choice and effect of emotion regulation strategies. A variety of factors interact in the growth process of teenagers, and jointly shape the development track of their emotional regulation ability.

## **3. The Relationship Between Adolescents' Emotion Regulation Ability and Academic Achievement**

### **3.1 Influence of Emotion Regulation Ability on Learning Motivation and Learning Attitude**

Emotion regulation ability has an important impact on adolescents' learning motivation and learning attitude. Research shows that adolescents with strong emotion regulation ability are more able to effectively manage and regulate the negative emotions caused by challenges, setbacks or pressures in the learning process, so as to maintain positive learning motivation<sup>[5]</sup>. Adolescents with weak emotion regulation ability are prone to anxiety, disappointment and other negative emotions due to emotional fluctuations, which tend to weaken their interest and persistence in learning. For example, when encountering difficulties or setbacks, students with strong emotional regulation ability can re-examine the learning task through positive self dialogue, cognitive reappraisal and other ways, so as to enhance their intrinsic motivation and continue to work hard. However, students with poor emotion regulation ability tend to show a negative attitude towards learning and are prone to give up learning due to frustration. Therefore, emotion regulation ability can not only affect adolescents' response to learning tasks, but also regulate their long-term pursuit of learning goals, which directly affects their academic achievement. In general, emotional regulation ability can help students maintain a stable mood and positive attitude in the face of academic challenges by optimizing their learning motivation and attitude.

### **3.2 Effect of Emotion Regulation Ability on Learning Engagement and Learning**

### **Strategies**

The ability of emotion regulation also plays a crucial role in adolescents' learning engagement and the use of learning strategies. Learning engagement refers to the cognitive and behavioral resources invested by students in the learning process, and the ability of emotion regulation directly affects the degree of students' learning engagement. Students with good emotion regulation ability can better cope with the pressure and challenges in learning, so as to maintain a high degree of learning engagement. When emotions are effectively managed, students can concentrate, maintain continuous learning motivation, and avoid distraction and learning efficiency decline caused by emotional fluctuations. In addition, the ability of emotion regulation can also affect the choice of learning strategies. Adolescents with strong emotional regulation ability tend to choose effective learning strategies, such as time management, goal setting, in-depth thinking and problem solving, while students with poor emotional management ability may tend to adopt negative learning strategies, such as procrastination, avoidance, etc. The choice of these learning strategies further affects their academic performance. Therefore, the ability of emotion regulation not only affects students' learning engagement, but also determines whether they can take appropriate learning strategies to optimize the learning effect.

### **3.3 The Moderating Effect of Emotion Regulation Ability on Academic Stress and Test Anxiety**

Academic stress and test anxiety are common emotional problems faced by teenagers, and emotion regulation ability plays a significant role in the regulation of these emotions. Academic stress usually comes from heavy learning tasks, time pressure, family expectations and other factors, while test anxiety is often related to the expectation and uncertainty of test results. Students with strong emotion regulation ability can relieve pressure and anxiety through effective emotion regulation strategies, such as deep breathing, meditation, cognitive reappraisal and so on, and keep calm and rational, so as to improve test performance. The study found that students with strong emotional regulation ability can face academic pressure more rationally, and can still take effective coping strategies in a stressful

environment, while students with poor emotional regulation ability are often vulnerable to anxiety, resulting in reduced learning efficiency and declining grades. Therefore, emotion regulation ability plays a key role in alleviating academic pressure and test anxiety. It helps teenagers manage emotional fluctuations, maintain a positive attitude, and enhance their psychological resilience in the face of academic challenges, so as to improve their academic achievement.

### **3.4 Empirical Research Progress on the Relationship Between Emotion Regulation Ability and Academic Achievement**

In recent years, more and more empirical studies have focused on the relationship between emotion regulation ability and academic achievement. These studies show that emotional regulation ability is positively correlated with academic achievement. The study found that students with strong emotion regulation ability tend to be more focused and engaged in learning, thus showing higher academic performance. For example, a study on middle school students found that students with strong emotional regulation ability were generally better than students with weak emotional regulation ability in academic performance. In addition, emotion regulation ability indirectly affects academic achievement through its regulating effect on learning motivation, learning engagement, learning strategy selection and academic pressure. Although the research results may be different in different disciplines and cultural backgrounds, on the whole, the improvement of emotion regulation ability can help students achieve better academic performance. This finding has important implications for educational practice, that is, in the process of improving students' academic achievement, the cultivation of emotion regulation ability should be paid attention to.

## **4. The Mechanism of Adolescents' Emotion Regulation Ability Affecting Academic Achievement**

### **4.1 Emotion Regulation Affects Academic Achievement Through The Mediating Effect of Learning Motivation**

The influence of emotion regulation ability on adolescents' academic achievement is often achieved through the mediating role of learning

motivation. Good emotion regulation ability enables students to effectively deal with the negative emotions generated in the learning process, such as anxiety, depression and self doubt, so as to maintain high learning motivation. Research shows that students with strong emotion regulation ability can maintain their intrinsic motivation and stimulate their motivation to continue their efforts through positive emotion management strategies in the face of difficulties or failures. Learning motivation itself is closely related to academic achievement. Students with higher learning motivation are more likely to set reasonable learning goals, adhere to learning and overcome academic challenges. Emotion regulation ability indirectly affects academic achievement by affecting the stability and persistence of learning motivation. At the same time, the enhancement of learning motivation will further encourage students to choose effective learning strategies, improve learning investment and time management ability, and ultimately promote the improvement of academic performance. Therefore, emotion regulation ability has become one of the important mechanisms to enhance academic achievement by enhancing learning motivation.

#### **4.2 Emotion Regulation Affects Learning Performance Through Self-Control and Executive Function**

Self control and executive function are important influencing factors of academic achievement, and emotion regulation ability plays a vital role in this process. Teenagers need to restrain their impulses through self-control in the process of learning, focus on learning tasks, and avoid external interference. Good emotion regulation ability can help students better manage emotional fluctuations, improve self-control ability, and enhance learning performance. The study found that students with strong emotional regulation ability can better control their emotional reactions and avoid the impact of emotional fluctuations on learning focus or decision-making quality. Executive function refers to the ability of individuals to adjust thinking, behavior and emotion to achieve goals. Emotional regulation indirectly improves the performance of executive function by regulating individual emotional response, so as to improve students' learning efficiency and effect. Students with good emotion regulation ability can

effectively plan and adjust their learning strategies in the learning process, maintain long-term focus, and achieve better academic performance.

#### **4.3 Emotion Regulation Affects Academic Development Through Mental Health and Learning Adaptation**

Emotional regulation ability is closely related to adolescents' mental health, which directly affects their academic adaptation and academic development. Students with strong emotion regulation ability can effectively manage negative emotions such as stress, anxiety and depression, so as to maintain mental health. Mental health plays an important role in academic achievement, because only students with stable emotions can effectively deal with academic challenges, maintain learning motivation and overcome academic pressure. The ability of emotion regulation can help reduce academic related psychological distress, so that students can adjust their mentality and take positive coping strategies in the face of academic difficulties. At the same time, the improvement of emotion regulation ability also enhances the students' learning adaptability, so that they can better adapt to the changes and pressures in the school environment. Good emotion regulation can help students maintain psychological flexibility and adaptability in the face of academic pressure, social conflict and other situations, which has a far-reaching impact on the continuous promotion of academic development.

#### **4.4 The Moderating Effect of Family and School Environment on Emotion Regulation and Academic Achievement**

Family and school environment are important moderating factors between adolescents' emotional regulation ability and academic achievement. As the first environment for individual growth, family plays a fundamental role in the cultivation of emotion regulation ability. A supportive family environment can provide adolescents with a sense of security and emotional support, help them better regulate their emotions, and avoid the negative impact of negative emotions on their studies. On the contrary, too harsh or indifferent family environment may lead to the lack of emotion regulation ability of teenagers, which will affect their academic achievement. In the school

environment, positive teacher-student relationship and good peer support also promote the development of emotion regulation ability. Research shows that students with strong emotional regulation ability can generally maintain high learning motivation and academic performance with the dual support of family and school. Emotional education and psychological counseling in school environment also help to enhance students' emotional regulation ability, so as to improve academic achievement.

### **5. Conclusion**

To sum up, adolescents' emotion regulation ability plays a vital role in their academic achievement. Emotion regulation ability affects academic performance through a variety of mechanisms, including the mediating effects of learning motivation, self-control and executive function, mental health and learning adaptation. In addition, the family and school environment play a regulatory role in the cultivation and development of adolescents' emotional regulation ability, and provide support for their academic achievement. Research shows that adolescents with strong emotional regulation ability can effectively manage emotions, maintain learning motivation, adopt appropriate learning strategies, and improve academic achievement in the face of academic pressure, test anxiety and other challenges. Therefore, in the practice of education, cultivating teenagers' emotion regulation ability not only helps to improve their academic performance, but also promotes their all-round development. Future research can further explore the interaction

between emotion regulation ability and other psychological factors, and how to effectively cultivate this ability in the family and school environment, so as to support the academic success of teenagers.

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