



# The Influence of Parent–Adolescent Attachment and Emotional Regulation Strategies on Aggressive Behavior in Chinese Middle School Students

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## Abstract

This mixed-methods study examined the relationship between parent-adolescent attachment, emotion regulation, and aggressive behavior among Chinese middle school students. Using convenience sampling, 318 students from the cities of Huangshan and Nanjing were surveyed. Standardized scales measured attachment ( $\alpha=0.812$ ), emotion regulation ( $\alpha=0.810$ ), and aggression ( $\alpha=0.964$ ). Semi-structured interviews were conducted with five parents and five teachers to provide qualitative insights for this study. Results showed that (1) Parent-adolescent attachment and emotion regulation are significantly correlated with aggression; higher attachment and cognitive reappraisal predict lower aggression, while expression suppression predicts higher aggression. (2) Attachment and emotion regulation are significant predictors of aggression. (3) Gender, grade, and region show substantial differences. (4) Interviews highlight home-school cooperation, early intervention, and sustained efforts as key strategies to reduce campus aggression and build a harmonious environment.

**Keywords:** middle school students, parent-adolescent attachment, emotional regulation strategies, aggressive behavior

## 1. Introduction

Aggressive behavior refers to actions intended to harm others directly or indirectly, including physical and verbal aggression, as well as the internal emotional states that drive them (Anderson & Bushman, 2002). Middle school (ages 12–15) is a critical transitional stage marked by emotional instability and frequent conflicts (Cheng, 2017). In recent years, adolescent aggression has been rising, becoming a significant public health concern (Li et al., 2019). Research shows that aggression harms both victims and aggressors, leading to physical and psychological damage, antisocial tendencies, and behavioral disorders (Liu & Wang, 2012). Early adolescence is a peak period for such incidents due to heightened emotional reactivity (Blakemore & Mills, 2014). Understanding aggression in this age group is essential for preventing psychological issues, delinquency, and future criminal behavior (Vitaro & Brendgen, 2005). Strong parent-adolescent attachment can reduce aggression, as secure early bonds significantly influence behavioral development. However, middle school students often



struggle with emotional turbulence due to their developmental stage, increasing the risk of outward aggression (Murray, 2021). Despite extensive research, gaps remain. Few studies have explored the link between emotion regulation and aggression in depth (Yang, 2020). Emotional suppression is associated with higher aggression, while effective cognitive reappraisal can reduce it (Robertson et al., 2012). Moreover, most studies focus on college students, overlooking younger adolescents whose self-awareness and emotional regulation are still developing and are especially sensitive to environmental influences

## 2. Research Methodology

### 1. Research sample

1.1 Middle School Students : The study targeted Chinese middle school students aged 12–15 years, using convenience sampling. One class per grade was randomly selected from public middle schools in Huangshan City (rural, Anhui Province) and Nanjing City (urban, Jiangsu Province). The planned sample size of 318 students was calculated using Taro Yamane's formula (Yamane, 1973). Students completed questionnaires independently on-site after being informed of the study's purpose and procedures. The final sample comprised 157 males (49.4%) and 161 females (50.6%), with equal distribution across grades (106 students each). Parental informed consent was obtained. Inclusion criteria: age 12–15, current middle school enrollment, voluntary participation. Exclusion criteria: age <12 or >15, not enrolled in middle school, or unwilling to participate.

1.2 Parents and Teachers : Purposive sampling selected five teachers and five parents from each grade in the two schools to achieve data saturation. Random coding ensured participant confidentiality. Semi-structured interviews, averaging 60 minutes, focused on students' aggressive behavior. All participants provided informed consent.

### 2. Research tools

2.1 Aggressive Behavior Scale : This study used the Buss–Perry Aggression Questionnaire (Buss & Perry, 1992), a 29-item measure covering four dimensions: Physical Aggression (PHY), Verbal Aggression (VER), Anger (ANG), and Hostility (HOS). Items are rated on a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree), with higher scores indicating greater aggression. The scale showed excellent internal consistency in this sample, with a total Cronbach's alpha of 0.964 and subscale alphas of 0.936 (PHY), 0.891 (VER), 0.925 (ANG), and 0.927 (HOS).

2.2 Parent-Adolescent Attachment Scale : This study used the Parental Attachment Inventory (Armsden & Greenberg, 1987), which contains 25 items covering three dimensions: trust, communication, and alienation, and is scored using a 5-point Likert scale (1=never to 5=always). Trust and communication are positively correlated, while alienation is negatively correlated. The higher the score, the stronger the attachment security. The scale showed good internal consistency in this sample, with an overall Cronbach's alpha coefficient of 0.812 and Cronbach's alpha coefficients of 0.915 (Communication), 0.897 (Trust), and 0.845 (Alienation) for each subscale.

2.3 Emotion Regulation Strategies Scale : This study used the Gross Emotion Regulation Scale (Gross, 1998). This questionnaire contains 10 items and 2 dimensions: cognitive reappraisal and expressive suppression. The 7-point Likert scale is used for scoring (1 = false to 7 = completely true), and the higher the score, the more frequent the use of each strategy. The total Cronbach's alpha coefficient is 0.810, including 0.943 for reappraisal and 0.920 for expressive suppression, indicating high reliability.

2.4 Semi-structured interviews : To supplement the quantitative data, semi-structured

interviews were conducted with five parents and five middle school teachers from Huangshan and Nanjing. These interviews offered deeper insights into the root causes of school aggression and informed the development of targeted intervention strategies.

### 3. Results

#### 1. Descriptive Statistical Analysis

1.1 Overall level of parent-adolescent attachment in middle school Mean scores for the Communication and Trust dimensions ranged from 3 to 4, indicating a moderately high level of interaction between parents and adolescents, with some room for improvement. The mean score for Alienation was 2.882. Since higher scores on this dimension reflect greater alienation, values above 4 may indicate family conflict or emotional disconnection, warranting closer monitoring.

**Table 1 :** Overall level of parent-adolescent attachment(n=318)

Variable	Mean	SD	Level
<b>Communication</b>	3.105	1.052	High
<b>Trust</b>	3.087	1.102	Medium
<b>Alienation</b>	2.882	1.066	Low
<b>attachment</b>	3.050	0.611	Medium

#### 1.2 Overall level of Emotion Regulation Strategies in middle school

The overall mean score (M = 4.040) suggests moderate use of emotion regulation strategies among middle school students. Higher Cognitive Reappraisal scores indicate a capacity for adaptive regulation, while elevated Expressive Suppression scores point to a tendency toward emotional suppression in some students, underscoring the need for targeted psychological guidance.

**Table 2 :** Overall level of emotion regulation strategies(n=318)

Variable	Mean	SD	Level
<b>Cognitive reappraisal</b>	4.037	1.757	High
<b>Expression suppression</b>	4.035	1.788	High
<b>Emotion regulation</b>	4.040	1.679	High

#### 1.3 Overall level of aggressive behavior in middle school

Statistical analysis indicates that overall aggression among middle school students is moderate and relatively balanced across sub-dimensions. Verbal aggression recorded the highest mean score, while hostility had the lowest, suggesting targeted areas for intervention.

**Table 3 :** Overall level of aggressive behavior(n=318)

Variable	Mean	SD	Level
<b>Physical aggression</b>	2.941	1.245	Medium
<b>Verbal aggression</b>	2.983	1.271	Medium
<b>Anger</b>	2.949	1.267	Medium
<b>Hostility</b>	2.928	1.249	Low
<b>Aggressive behavior</b>	2.950	1.077	Medium

## 2. Comparative Statistical Analysis

2.1 Comparison of the characteristics and differences of middle school students' parent-adolescent attachment Attachment Characteristics: During middle school, adolescents seek greater independence, reducing behavioral dependence while still needing emotional support. This shift can create tension, with parents' roles evolving from "caregiver" to "consultant." Positive interactions foster secure attachment, while negative experiences may lead to insecurity(Steinberg, 2001). Analysis of Differences: 1) Grade: Seventh graders often show temporary increased dependence as they adjust to new environments. Eighth graders typically exhibit stronger autonomy needs, sometimes leading to communication challenges. By ninth grade, attachment patterns tend to stabilize(Collins & Laursen, 2004). 2)Gender: Girls generally maintain closer, more emotionally open relationships with parents—especially mothers—while boys tend to be more emotionally reserved(Furman & Buhrmester, 1992). 3)Urban–rural: Urban parents often have higher education levels and use more democratic, emotionally supportive communication styles. In contrast, rural parents may emphasize traditional values, obedience, and academic achievement. 4) Only-child status: No significant differences, suggesting family environment has a greater impact than sibling status alone(Falbo & Poston Jr, 1993).

**Table 4 :** Descriptive statistics of attachment -1 (N=318)

Variable	Group	Mean	SD	F	p	LSD
Attachment	grade7	3.072	0.659	1.426***	0.242	7、8<9
	grade8	3.100	0.553			
	grade9	2.966	0.612			

**Table 5 :** Descriptive statistics of attachment -2 (N=318)

variable	group	Mean	SD	t	p
Attachment	male	2.942	0.617	-3.042**	0.003
	female	3.147	0.589		
	urban	3.169	0.584	3.670***	0.001
	rural	2.923	0.613		
	only child	2.998	0.595	-1.231	0.219
	Non-only child	3.083	0.622		

Note: \*\*p<0.01; \*\*\*p<0.001

## 2.2 Comparison of the characteristics and differences in emotion regulation strategies of middle school students

Characteristics of Emotion Regulation Strategies: Middle school students experience emotional volatility and growing self-awareness. Their regulatory abilities are developing but immature. While cognitive reappraisal starts to emerge, it still requires adult guidance. Expressive suppression is common, especially under social pressure(Gross, 1998) Analysis of Differences: 1) Grade: Grade 7 students rely more on support and use reappraisal more. Grade 8 shows peak emotional swings. Grade 9 students increasingly use suppression due to academic stress(Yang, 2020). 2) Gender: Gender: Girls prefer cognitive reappraisal and seek support; boys often suppress emotions(Zimmermann & Iwanski, 2014). 3) Urban–rural: Urban students have better access to mental health resources; rural students face more emotional neglect and stress. 4) Only-child: No major differences found; family dynamics matter more than sibling status(Zhao, 2017).

**Table 6 :** Descriptive statistics of emotion regulation strategies -1 (N=318)

Variable	Dimension	Group	Mean	SD	f	p	LSD
<b>Emotion Regulation Strategies</b>	cognitive reappraisal	grade7	4.330	1.096	3.798*	0.024	7、8>9
		grade8	4.101	1.571			
		grade9	3.681	1.732			
	expression suppression	grade7	3.634	1.901	4.665**	0.009	7、8<9
		grade8	3.887	1.674			
		grade9	4.375	1.718			

Note: \*p<0.05; \*\*p<0.01.

**Table 7:** Descriptive statistics of emotion regulation strategies -2 (N=318)

Variable	Dimension	Group	Mean	SD	t	p		
<b>Emotion Regulation Strategies</b>	cognitive reappraisal	male	3.701	1.736	-3.430***	0.001		
		female	4.365	1.72				
	expression suppression	urban	4.188	1.76	1.530	0.127		
		rural	3.887	1.747				
		one child	4.054	1.777				
		not one child	4.024	1.746				
		male	4.199	1.796			-2.316*	0.021
		female	3.738	1.756				
	expression suppression	urban	3.759	1.844	-2.065*	0.040		
		rural	4.171	1.712				
		one child	3.831	1.792				
		not one child	4.070	1.784				

Note: \*p<0.05; \*\*\*p<0.001

### 2.3 Comparison of the characteristics and differences of aggressive behaviors among middle school students

Aggressive behavior in middle school students is influenced by adolescent physiological and psychological development, social-cognitive factors, and environmental context. It takes diverse forms—including physical and verbal aggression—with complex, often emotionally driven motivations. Some behaviors may also be covert or indirect (Anderson & Bushman, 2002).

Analysis of differences: 1) Grade: Aggression increases with grade level. 9th graders show significantly higher aggression than 7th graders, likely due to developmental and academic pressures. 2) Gender: Boys report higher aggression than girls, reflecting differences in emotion regulation and social expectations (Archer, 2004). 3) Urban-rural: Urban students show higher aggression levels than rural peers, suggesting environmental and social stress differences. 4) Only child: No significant differences, indicating that grade, gender, and location have more influence than family structure.

**Table 8 :** Descriptive statistics of aggressive behavior-1 (N=318)

Variable	Group	Mean	SD	F	p	LSD
<b>Aggressive</b>	grade7	2.729	1.149	11.861***	0.001	7、8<9



<b>Behavior</b>	grade8	2.807	0.949
	grade9	3.304	1.042

Note: \*\*\*p<0.001

**Table 9 :** Descriptive statistics of aggressive behavior-2(N=318)

Variable	Group	Mean	SD	t	p
<b>Aggressive Behavior</b>	male	3.178	1.052	3.870***	0.001
	female	2.721	1.056		
	urban	2.77	1.095	-2.962***	0.954
	rural	3.123	1.032		
	one child	2.943	1.092	-0.058***	0.954
	not one child	2.95	1.068		

Note: \*\*\*p<0.001

### 3. Correlation Analysis

Pearson correlation analyses (Table 13) revealed significant relationships among parent–adolescent attachment, emotion regulation strategies, and aggressive behavior. Parent–adolescent attachment was positively correlated with cognitive reappraisal and negatively correlated with aggressive behavior(Li et al., 2025), suggesting that stronger attachment promotes adaptive regulation and reduces aggression. Cognitive reappraisal was negatively associated with aggressive behavior(Roberton et al., 2012), indicating its protective role. Conversely, expressive suppression was positively associated with aggressive behavior, highlighting its potential risk(Gross & John, 2003). Additionally, all aggression subdimensions (physical aggression, verbal aggression, anger, and hostility) were highly correlated with overall aggression. These findings underscore the importance of secure parent–adolescent attachment and positive emotion regulation strategies in mitigating aggressive behavior in adolescents(Buss & Perry, 1992).

**Table 10 :** Correlation analysis results of attachment, emotion regulation, and aggressive behavior

Variable	1	2	3	4	5	6	7	8
<b>1</b>	1							
<b>2</b>	.244***	1						
<b>3</b>	.267***	.792***	1					
<b>4</b>	-.303***	-.514***	.529***	1				
<b>5</b>	-.286***	-.531***	.508***	.651***	1			
<b>6</b>	-.305***	-.517***	.546***	.689***	.657***	1		
<b>7</b>	-.264***	-.451***	.466***	.597***	.612***	.654***	1	
<b>8</b>	-.338***	-.583***	.597***	.878***	.819***	.874***	.844***	1

Note: 1= parent-adolescent attachment,2= cognitive reappraisal, 3= expression suppression,4=physical aggression, 5=verbal aggression, 6=anger, 7=hostility,8=aggressive behavior,\*p < 0.05; \*\*p < 0.01 ; \*\*\*p < 0.001.

#### 4. Regression Analysis

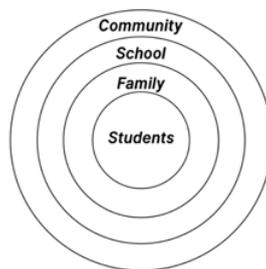
Regression analysis was conducted to examine the effects of parent–adolescent attachment dimensions (communication, trust, alienation) and emotion regulation strategies (cognitive reappraisal, expressive suppression) on aggressive behavior. The results indicated that communication, trust, and cognitive reappraisal were significant negative predictors of aggressive behavior. Conversely, alienation and expressive suppression were significant positive predictors. Stronger parent–adolescent communication and trust, and greater use of cognitive reappraisal, are associated with reduced aggressive behavior. Enhancing family communication and trust, reducing alienation, and fostering adaptive emotion regulation strategies such as cognitive reappraisal may be effective approaches to mitigate aggressive behavior in adolescents(Allen & Land, 1999).

**Table 11** :Regression analysis of dimensions of attachment and dimensions of emotion regulation on aggressive behavior

Variable	predictive variables		b	SE	$\beta$	t
Aggressive Behavior	Parent	communication	-0.176	0.062	-0.172	-2.848***
	adolescent	trust	-0.139	0.057	-0.143	-2.442***
	attachment	alienation	0.333	0.058	0.330	5.723***
	emotion	cognitive	-0.181	0.044	-0.295	-4.094***
	regulation	reappraisal				
	strategies	expression	0.219	0.043	0.363	5.034***
		suppression				

Note: \*p<0.05; \*\*p<0.01; \*\*\*p<0.001

#### 5. Model of preventing and reducing aggressive behavior in middle school students



**Figure1:** Models for Reducing Aggressive Behavior

Traditional psychological theories have emphasized internal factors in shaping behavior, but contemporary research highlights the critical role of environmental influences. Bronfenbrenner’s ecological systems theory provides a comprehensive framework for understanding development through dynamic interactions across multiple environmental layers(Bronfenbrenner, 1996). His theory describes five interconnected systems—the microsystem, mesosystem, exosystem, macrosystem, and chronosystem—that continuously interact to shape adolescent behaviors, including aggression(Liu & Meng, 2009).Drawing on this framework, this study conducted structured interviews with teachers and parents in urban (Nanjing) and rural (Huangshan) middle schools to identify factors contributing to aggressive behavior and strategies for its reduction. The resulting model addresses four key domains: students, family, school, and community. By promoting student self-regulation, enhancing family support, strengthening school guidance, and optimizing community environments, this

approach offers an integrated solution that considers both individual and contextual factors to reduce adolescent aggression.

1. Student-Oriented Strategies Keywords: self-awareness, emotional regulation, empathy Core Objective: Help students recognize emotions and develop empathy Specific Measures: 1) Emotional Awareness Training: Integrate mental health classes that use role-playing and scenario simulation to help students identify early signs of anger and other emotions. Encourage the use of emotion diaries to record triggering events and coping strategies. 2)Media-Based Emotional Education: Use emotion-themed educational films to illustrate the harm caused by aggressive behaviors and facilitate reflective discussions. 3)Emotion Regulation Skills: Teach students specific regulation strategies (e.g., deep breathing, cognitive reappraisal). Children with strong emotional regulation skills are less likely to exhibit aggression. When students manage emotions effectively and establish secure attachment relationships, the likelihood of aggressive behavior decreases significantly.

2. Family-Oriented Strategies Keywords: communication, positive modeling, emotional support

Core Objective: Strengthen family dynamics, reduce negative modeling, and provide emotional security

Specific Measures: 1) Positive Role Modeling: Parents should avoid arguments or violent conflict resolution in front of children. Regular family meetings can help establish shared household rules (e.g., no aggression, communication first). 2)Emotional Safe Space: Create an environment where children can freely express negative emotions. Encourage shared responsibilities (e.g., chores), promote empathy through volunteering, and foster emotional bonding. 3)Secure attachment relationships with parents significantly reduce the risk of adolescent aggression. Parents serve as the first emotional educators in a child's life and play a key role in teaching self-regulation.

3. School-Oriented Strategies Keywords: rule-setting, counseling, positive reinforcement Core Objective: Build a non-aggressive, supportive school environment. Specific Measures: 1) Clear Anti-Aggression Policies: Establish transparent school rules against aggression. Enable anonymous reporting to ensure student safety. 2)Behavioral Incentives: Implement a "Kindness Scorecard" system that rewards peer-supportive behaviors. 3)Conflict Resolution Training: Provide communication workshops and conflict management training. 4)A safe, guided, and structured environment led by caring teachers significantly reduces student aggression.

4. Community-Oriented Strategies Keywords: safe environment, extracurricular engagement, media literacy, family-school partnership Core Objective: Leverage community resources to create a positive developmental ecosystem Specific Measures: 1) Youth Partnerships: Collaborate with youth centers to offer free emotional regulation workshops. 2)Parent Support Networks: Establish community-based parent support groups for regular sharing of parenting experiences. 3)Positive Media Curation: Recommend developmentally appropriate, prosocial media content. 4)Mental Health Access: Create local "Youth Mental Health Stations" for free counseling services. 5)Home-School-Community Collaboration: Maintain regular communication between families and schools to co-develop personalized intervention plans.

Expected Outcomes: Short-term: Reduction in overt aggressive behaviors (e.g., physical aggression). Mid-term: Improved student emotional regulation and empathy. Long-term: Formation of a supportive developmental ecosystem, reducing the recurrence of aggression. Based on quantitative analysis and in-depth parent interviews, this intervention framework highlights the critical role of parent-adolescent attachment and emotional regulation in the development of adolescent aggression(Pascuzzo et al., 2013). It emphasizes the importance of coordinated intervention across family, school, and community systems to



enhance emotional competence and relational security. This multi-level model not only clarifies the underlying mechanisms of aggression but also offers practical, multi-dimensional intervention pathways to foster a healthy, supportive environment for adolescent development (Durlak et al., 2011).

#### **4. Conclusion**

1) Differences by Demographic Variables : This study found significant differences in parent-adolescent attachment, emotion regulation, and aggressive behavior among middle school students based on gender, grade level, and geographic region. Unequal distribution of educational resources between urban and rural areas, differences in living standards, and variations in the amount of time parents spend with their children may contribute to these differences. Ninth-grade students face greater academic pressure compared to those in seventh and eighth grades, which may account for their higher levels of aggressive behavior. Additionally, physiological and psychological developmental differences between genders contribute to boys showing higher levels of aggression than girls.

2) Correlation Between Parent-Adolescent Attachment, Emotion Regulation, and Aggressive Behavior : The study found a significant negative correlation between parent-adolescent attachment and aggressive behavior. Secure attachment helps adolescents develop positive emotion regulation strategies, reducing the likelihood of aggressive behavior. Conversely, lower levels of attachment weaken emotional regulation abilities and increase the risk of aggression. Parent-adolescent attachment influences aggressive behavior indirectly by shaping emotional regulation capacity. Therefore, fostering secure attachment relationships and improving emotion regulation abilities are essential strategies for reducing aggressive behavior among middle school students.

3) Predictive Role of Parent-Adolescent Attachment and Emotion Regulation : Parent-adolescent attachment and emotion regulation are significant predictors of aggressive behavior in middle school students. Secure attachment supports stable self-concept and emotional management, enabling students to cope with stress and challenges in positive, healthy ways, thereby reducing aggression. In contrast, insecure attachment may lead to emotional distance, alienation, and lack of support in interpersonal relationships. When conflicts arise, these students may adopt aggressive responses due to poor communication skills. Students with strong emotion regulation abilities can better identify, understand, and express their emotions, adopting positive coping strategies to reduce aggressive behavior, while those with poor emotion regulation skills are prone to emotional outbursts and impulsive aggression.

4) Mediating Mechanisms : Parent-adolescent attachment and emotion regulation jointly influence aggressive behavior through partial mediation by cognitive reappraisal and expressive suppression. Secure attachment and strong emotion regulation abilities promote positive cognitive appraisal of emotional experiences and reduce reliance on expressive suppression, thereby lowering the likelihood of aggressive behavior.

#### **5. Discussion**

##### **1. Impact of Demographic Variables on Study Variables**

The study shows that overall, regardless of grade level, gender, only-child status, or residence, middle school students exhibit moderate levels of aggression, with relatively few displaying high levels of aggressive behavior. Independent-samples t-tests revealed that boys had significantly higher aggression levels than girls. Urban students also showed significantly higher aggression levels than their rural counterparts. This supports Ren (2009), who argued that differences in upbringing and parenting styles between urban and rural families contribute

to disparities in aggression levels.

Grade differences were also significant: seventh-grade students had the lowest aggression levels, eighth-grade students were intermediate, and ninth-grade students exhibited the highest levels. One-way ANOVA results confirmed these differences ( $P < 0.001$ ). This trend is likely linked to developmental and academic factors: seventh graders are transitioning from primary to secondary school, with developing independence but less psychological stability; eighth grade represents the peak of adolescence, characterized by imbalances between physical and psychological development, leading to emotional volatility; ninth-grade students face heightened academic pressure, which can intensify negative emotions and aggressive behavior.

The study also found no significant differences in parent-adolescent attachment based on only-child status or place of residence. Similarly, attachment levels did not differ significantly by grade, consistent with Liu (2006), who found no grade-based differences in parent-adolescent attachment. However, girls exhibited significantly higher levels of attachment than boys, possibly due to gender differences in emotional expression and interpersonal sensitivity. Girls may be more emotionally expressive and responsive to parental interactions, while boys may maintain emotional depth but exhibit less overt attachment.

Bivariate correlation analysis showed a negative relationship between parent-adolescent attachment and aggression. Secure and stable attachment relationships facilitate better parent-adolescent communication, provide emotional support, and reduce the likelihood of aggressive behavior.

## **2. Mechanisms Linking Attachment and Emotion Regulation to Aggressive Behavior**

The study demonstrated that parent-adolescent attachment quality significantly predicts aggressive behavior, aligning with attachment theory, which emphasizes the lasting influence of early caregiver relationships on social development. Insecure attachment often stems from early neglect or lack of parental responsiveness, leading to low trust and potential hostility in adolescence. In contrast, secure attachment provides adolescents with emotional security and guidance, helping them develop effective communication and problem-solving skills that reduce aggression.

Emotion regulation ability was also found to be negatively correlated with aggressive behavior. Emotion regulation theory posits that individuals' cognitive assessment and management of negative emotions directly shape their adaptive responses. This study found that expressive suppression was positively associated with aggression: students who habitually suppress emotions may eventually express them explosively as aggression. Conversely, students with strong cognitive reappraisal skills reinterpret negative events as manageable challenges and adopt constructive coping strategies. Schools and families can work together to implement training programs that help parents act as "emotion coaches," improving adolescents' emotion regulation skills and ultimately reducing aggressive behavior.

In summary, this study demonstrates that middle school students' aggressive behavior is influenced by various demographic factors, with parent-adolescent attachment and emotion regulation both showing significant negative correlations with aggression and predictive effects on its occurrence. Building secure parent-adolescent attachment relationships and enhancing emotion regulation abilities—especially in developing cognitive reappraisal and reducing expressive suppression—are critical strategies for mitigating aggression. Collaborative, multi-level interventions involving families, schools, and communities are essential to promoting healthy psychological development and social adaptation in middle school students.

## **6. Suggestions**

Based on data and interviews, this study offers the following concise recommendations to reduce aggressive behavior in middle school students:

### 1. Adopt a Correct Understanding of Aggressive Behavior

Adolescence is a period of psychological and physiological change, often marked by emotional volatility and academic stress. Aggressive behavior can sometimes be a defensive response rather than deliberate harm. Schools and families should avoid stigmatizing such behavior and instead provide mental health education to build self-awareness and healthy coping strategies.

### 2. Improving the learning and living environment for middle school students

Aggression can be learned through observation and imitation. Enhancing school facilities, ensuring equitable resources, and fostering supportive classroom climates can reduce aggression.

### 3. Strengthen School-Based Mental Health Education.

Schools should prioritize the prevention of aggression through legal awareness and nonviolent conflict resolution training. Teachers can guide students in healthy emotional expression and self-regulation via counseling, group activities, and structured lessons. Cognitive reappraisal should be encouraged over expressive suppression. Rural schools should expand mental health resources, while urban schools should address more covert forms of aggression.

### 4. Enhance Home–School Collaboration

Close cooperation between families and schools is essential to create safe, supportive environments. Joint efforts should focus on clear behavioral expectations, consistent emotional guidance, and timely information sharing about students' emotional and behavioral changes to prevent escalation of conflicts. Strong partnerships help promote positive habits and reduce aggressive behavior among middle school students.

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