

## RESEARCH ARTICLE

## The Influence of Parenting Styles on the Development of Self-Regulation in Adolescents

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### ABSTRACT

Self-regulation represents a critical developmental milestone during adolescence, significantly influencing academic achievement, social relationships, and long-term well-being. This literature review examines the relationship between parenting styles and self-regulation development in adolescents, synthesizing recent empirical evidence from 2023-2025. Drawing from Baumrind's parenting style framework and contemporary self-regulation theories, this review analyzes how authoritative, authoritarian, permissive, and neglectful parenting approaches differentially impact adolescents' capacity for emotional regulation, behavioral control, and cognitive self-management. Findings indicate that authoritative parenting, characterized by warmth combined with appropriate autonomy support, consistently predicts superior self-regulation outcomes. Conversely, authoritarian and neglectful parenting styles correlate with deficits in emotional regulation and increased behavioral problems. The review highlights emotion regulation strategies as critical mediating mechanisms and discusses implications for educational interventions and family-based programs within global education frameworks. This synthesis contributes to understanding how culturally-sensitive, evidence-based parenting practices can promote optimal self-regulation development in diverse adolescent populations.

**Keywords:** (adolescents, emotional regulation, parenting styles, self-regulation, developmental psychology)

### INTRODUCTION

Adolescence represents a transformative developmental period characterized by profound biological, cognitive, and psychosocial changes that fundamentally reshape an individual's capacity for self-regulation. Self-regulation, defined as the ability to monitor, modulate, and direct one's thoughts, emotions, and behaviors toward goal achievement, emerges as a cornerstone competency that predicts academic success, mental health outcomes, and social adaptation throughout the lifespan. During adolescence, the prefrontal cortex undergoes significant maturation, enabling increasingly sophisticated executive functions, yet this neural development occurs within complex social contexts where parenting practices exert substantial influence on regulatory capacity development.

Contemporary research underscores that self-regulation difficulties during adolescence contribute to a constellation of adverse outcomes, including academic underachievement, substance abuse, delinquency, and mental health disorders. Understanding the factors that promote or hinder self-regulation development thus represents a critical priority for developmental psychology and educational practice. Among these factors, parenting styles have been consistently identified as primary socializing influences that shape adolescents' regulatory competencies through modeling, reinforcement patterns, and the emotional climate they establish within family systems.

The relationship between parenting styles and adolescent self-regulation has garnered increasing attention within the context of global education

initiatives that emphasize holistic student development. The United Nations Sustainable Development Goal 4, which advocates for inclusive and equitable quality education, implicitly recognizes that academic achievement cannot be divorced from students' socio-emotional competencies, including self-regulation. Educational systems worldwide are increasingly acknowledging that parenting practices constitute essential environmental factors that either facilitate or constrain students' capacity to engage productively with learning experiences. This recognition has catalyzed multidisciplinary efforts to understand how different parenting approaches influence the developmental trajectories of adolescent self-regulation.

Baumrind's seminal parenting style typology, which categorizes parenting approaches along dimensions of demandingness and responsiveness, provides a foundational framework for investigating these relationships. Authoritative parenting, characterized by high warmth combined with appropriate behavioral expectations and autonomy support, has been theoretically and empirically distinguished from authoritarian parenting (high control with low warmth), permissive parenting (high warmth with minimal structure), and neglectful parenting (low involvement across dimensions). While this framework has demonstrated cross-cultural applicability, recent scholarship has emphasized the importance of examining how cultural contexts moderate the relationships between specific parenting practices and developmental outcomes.

Despite extensive research documenting associations between parenting styles and various adolescent outcomes, several knowledge gaps persist. First, while numerous studies have examined parenting effects on specific regulatory domains such as emotional control or behavioral inhibition, fewer have adopted integrative frameworks that consider self-regulation as a multidimensional construct encompassing emotional, behavioral, and cognitive components. Second, the mechanisms through which parenting styles influence self-regulation development remain incompletely understood, with emerging evidence suggesting that emotion regulation strategies may serve as critical mediating pathways.

Third, most existing research has been conducted in Western contexts, limiting understanding of how these relationships manifest across diverse cultural settings where collectivist values may shape both parenting practices and regulatory development differently.

This literature review addresses these gaps by synthesizing recent empirical evidence examining the influence of parenting styles on self-regulation development in adolescents. Specifically, this review aims to: (1) analyze how different parenting styles (authoritative, authoritarian, permissive, and neglectful) differentially predict adolescent self-regulation outcomes across emotional, behavioral, and cognitive domains; (2) identify mediating mechanisms, particularly emotion regulation strategies, through which parenting styles influence self-regulation development; (3) examine cross-cultural variations in these relationships; and (4) discuss implications for educational interventions and family-based programs designed to promote optimal self-regulation development within diverse adolescent populations.

The following research questions guide this review: How do different parenting styles predict adolescent self-regulation outcomes? What mechanisms mediate the relationship between parenting styles and self-regulation development? How do cultural contexts moderate these relationships? What are the practical implications for educational practice and family intervention programs? By addressing these questions through systematic analysis of recent high-quality empirical studies, this review contributes to constructing a multidisciplinary framework for understanding how family socialization practices intersect with educational goals to promote adolescent development within global education contexts.

## METHOD

### *Research Design*

This study employs a systematic literature review methodology to synthesize recent empirical evidence examining the relationship between parenting styles and self-regulation development in

adolescents. A literature review design was selected as most appropriate for achieving the research objectives, as it enables comprehensive analysis of existing knowledge, identification of convergent findings across multiple studies, and detection of research gaps that require further investigation. This approach aligns with best practices for evidence synthesis in developmental psychology and educational research, allowing for integration of findings across diverse methodological approaches, cultural contexts, and measurement strategies.

### *Data Collection Strategy*

The literature search was conducted using a systematic protocol designed to identify relevant peer-reviewed journal articles, meta-analyses, and comprehensive reviews published between 2023 and 2025. This timeframe was selected to ensure inclusion of the most current empirical evidence reflecting contemporary theoretical frameworks and methodological advances. Multiple academic databases were searched, including PubMed/MEDLINE, PubMed Central (PMC), Google Scholar, Scopus, PsycINFO, and specialized journals in developmental psychology and education.

The search strategy employed Boolean operators to combine relevant keywords across three primary concept domains: (1) parenting constructs: "parenting styles," "authoritative parenting," "authoritarian parenting," "permissive parenting," "parental warmth," "parental control," "parenting practices"; (2) self-regulation constructs: "self-regulation," "emotional regulation," "self-control," "executive function," "behavioral regulation," "cognitive control"; and (3) developmental period: "adolescents," "adolescence," "teenagers," "youth." These keyword combinations were adapted to accommodate the specific syntax requirements of different databases.

Inclusion criteria for article selection specified that studies must: (a) be published in peer-reviewed journals between 2023 and 2025; (b) examine relationships between parenting styles or practices and self-regulation outcomes; (c) include adolescent participants (ages 10-19 years); (d) employ quantitative, qualitative, or mixed methods approaches; (e) be published in English; and (f)

provide sufficient methodological detail to assess study quality. Exclusion criteria eliminated studies that: (a) focused exclusively on clinical or special populations without comparison groups; (b) examined parenting effects in early childhood or adulthood without including adolescents; (c) did not directly measure self-regulation or its component processes; or (d) consisted of opinion pieces, commentaries, or non-empirical reviews without original data.

The initial search yielded approximately 150 potentially relevant articles. Following screening of titles and abstracts against inclusion criteria, 45 articles were selected for full-text review. After detailed evaluation of methodological quality and relevance, 10 primary empirical studies, meta-analyses, and comprehensive reviews were selected for in-depth analysis and synthesis. These selected sources represent high-quality research with rigorous methodologies, adequate sample sizes, validated measurement instruments, and findings directly addressing the review's research questions. Additional priority was given to studies examining mediating mechanisms, cross-cultural samples, and longitudinal designs that permit stronger causal inferences.

### *Data Analysis*

The selected literature was analyzed using a thematic synthesis approach, which involved three iterative phases: (1) systematic extraction of relevant findings from each study; (2) identification of recurring themes, patterns, and contradictions across studies; and (3) integration of findings into a coherent theoretical framework addressing the review's research questions. For each included study, key information was systematically extracted including: study design and methodology, participant characteristics and sample size, cultural context, measurement instruments for parenting and self-regulation constructs, statistical analyses or analytical approaches, primary findings, and identified limitations.

Synthesis focused on identifying convergent evidence regarding how specific parenting dimensions (warmth, control, autonomy support, psychological control) predict different aspects of self-regulation (emotional, behavioral, cognitive),

with particular attention to mediating mechanisms such as emotion regulation strategies. Cross-cultural comparisons were conducted where sufficient data existed across diverse samples. Quality assessment considered methodological rigor, measurement validity, sample representativeness, and appropriate statistical analyses. Findings were organized thematically to address each research question systematically, with critical evaluation of the strength of evidence and identification of areas requiring further investigation.

## RESULTS

### Differential Effects of Parenting Styles on Adolescent Self-Regulation

Recent empirical evidence demonstrates that parenting styles exert substantial and differentiated influences on adolescent self-regulation development across emotional, behavioral, and cognitive domains. A comprehensive meta-review analyzing 136 studies on self-regulation development from infancy through adolescence identified parents as primary socialization agents whose practices systematically shape regulatory capacities throughout developmental periods. This meta-analysis revealed that the quality of parent-child relationships, characterized by dimensions of warmth, structure, and autonomy support, consistently predicts self-regulation outcomes with effect sizes ranging from moderate to large across diverse samples.

Authoritative parenting, characterized by high levels of warmth, appropriate behavioral expectations, and respect for adolescent autonomy, emerges as the most beneficial parenting style for promoting self-regulation development. Multiple studies conducted across different cultural contexts demonstrate that adolescents raised by authoritative parents exhibit superior capacity for emotional regulation, behavioral self-control, and cognitive management compared to peers experiencing other parenting styles. A longitudinal study with 719 adolescent participants found that perceived parental warmth combined with appropriate behavioral guidance predicted enhanced use of adaptive emotion regulation strategies, which in

turn promoted prosocial behavior and reduced externalizing problems. These findings suggest that authoritative parenting provides an optimal developmental context where adolescents feel emotionally supported while simultaneously learning to manage their impulses and emotions through parental modeling and scaffolding.

Conversely, authoritarian parenting, characterized by high demandingness combined with low responsiveness and excessive psychological control, demonstrates consistent negative associations with self-regulation outcomes. Research examining 895 Chinese adolescents found that parental rejection and harsh control predicted lower resilience and greater emotional and behavioral problems, with these effects mediated through deficits in emotion regulation capacity. Similarly, a study of 472 Portuguese adolescents revealed that authoritarian parenting predicted lower self-control, which subsequently increased risk for both internalizing problems such as anxiety and depression, and externalizing behaviors including aggression and rule-breaking. These findings indicate that while authoritarian parents may achieve short-term behavioral compliance through punitive control, this approach undermines development of internalized self-regulatory capacities that adolescents need for autonomous functioning.

Permissive parenting, characterized by high warmth but minimal structure and behavioral expectations, also demonstrates problematic associations with self-regulation development, though through different mechanisms than authoritarian parenting. Adolescents experiencing permissive parenting often struggle with behavioral inhibition and impulse control, as they have not internalized clear behavioral standards or experienced consistent consequences for their actions. Research indicates that permissive parenting predicts difficulties with delay of gratification, academic self-discipline, and resistance to peer pressure, suggesting that warmth alone, without appropriate structure and expectations, proves insufficient for promoting robust self-regulatory capacities.

Neglectful parenting, characterized by low involvement across both warmth and control



dimensions, demonstrates the most detrimental effects on adolescent self-regulation. This parenting style, marked by parental disengagement and minimal monitoring, predicts the poorest outcomes across all regulatory domains. Adolescents experiencing neglectful parenting exhibit heightened vulnerability to emotional dysregulation, behavioral problems, substance abuse, and academic failure. The absence of both emotional support and behavioral structure creates a developmental context profoundly lacking in the scaffolding adolescents require to develop self-regulatory competencies.

### **Emotion Regulation as a Mediating Mechanism**

Emerging evidence highlights emotion regulation strategies as critical mediating mechanisms through which parenting styles influence broader self-regulation outcomes and psychological adjustment. Multiple studies demonstrate that parenting practices shape adolescents' repertoire of emotion regulation strategies, which subsequently predict mental health, behavioral adjustment, and social functioning. A study examining 967 Turkish adolescents found that adaptive emotion regulation strategies, including cognitive reappraisal and problem-focused coping, mediated the relationship between positive parenting practices and psychological resilience. This finding suggests that authoritative parents promote self-regulation not only through direct behavioral management but also by teaching adolescents how to effectively modulate their emotional experiences.

Research specifically examining cognitive emotion regulation strategies reveals that different parenting styles predict distinct patterns of regulatory strategy use. Authoritative parenting predicts greater use of adaptive strategies such as positive refocusing, perspective-taking, and planning, whereas authoritarian and neglectful parenting predict greater reliance on maladaptive strategies including rumination, catastrophizing, and self-blame. These differential strategy patterns have significant implications for mental health outcomes, as adaptive emotion regulation strategies buffer against anxiety and depression while maladaptive strategies amplify emotional distress.

A particularly noteworthy longitudinal study involving 719 adolescents examined bidirectional

relationships between perceived parenting and adolescent behavior, with emotion regulation serving as a mediating mechanism. Results indicated that parental warmth at Time 1 predicted enhanced emotion regulation capacity at Time 2, which subsequently predicted increased prosocial behavior and reduced externalizing problems at Time 3. Importantly, this study also found reciprocal effects whereby adolescents' prosocial behavior influenced subsequent parenting, suggesting a dynamic transactional process rather than a unidirectional influence. These findings underscore the importance of considering developmental cascades whereby parenting influences emotion regulation, which shapes behavior, which in turn affects future parenting practices.

The mediating role of emotion regulation is further supported by research examining emotional dysregulation as a pathway linking negative parenting to adolescent psychopathology. A study published in 2024 found that parental overprotection and lack of care predicted emotional dysregulation in adolescents, which mediated relationships with both internalizing symptoms such as anxiety and depression and externalizing problems including aggression and conduct issues. This research highlights that deficits in emotion regulation represent a transdiagnostic vulnerability factor that explains why negative parenting predicts diverse forms of psychological and behavioral problems during adolescence.

### **Cross-Cultural Considerations and Contextual Moderators**

While the general pattern of findings demonstrates consistency across diverse cultural contexts, with authoritative parenting predicting optimal outcomes and neglectful parenting predicting poorest outcomes, important cultural variations exist in how specific parenting practices relate to self-regulation development. Research conducted in Chinese, Portuguese, and Turkish adolescent samples reveals both universal patterns and culture-specific manifestations of parenting effects.

In collectivist cultural contexts such as China, where filial piety and respect for parental authority represent core cultural values, moderate levels of parental control may be interpreted differently than

in individualistic Western contexts. Research with Chinese adolescents indicates that parental behavioral control, when combined with warmth and perceived as reflecting parental concern rather than domination, can predict positive outcomes including enhanced self-discipline and academic achievement. However, psychological control characterized by guilt induction and love withdrawal demonstrates consistently negative effects across cultural contexts, predicting emotional dysregulation and psychological distress in both collectivist and individualistic societies.

Cultural variations also appear in how adolescents interpret and respond to parental autonomy support. In cultures emphasizing interdependence and family harmony, autonomy may be conceptualized less as independence from parents and more as responsible self-management within family and community contexts. Research suggests that autonomy support adapted to cultural values, emphasizing adolescents' capacity for responsible decision-making while maintaining family connection, promotes optimal self-regulation development across diverse cultural settings.

Socioeconomic context represents another important moderator of parenting effects on self-regulation. Families facing economic stress and resource limitations may experience constraints on their capacity to provide consistent structure and emotional support. Research indicates that interventions supporting stressed families through parenting education, mental health services, and community resources can buffer against the negative effects of environmental stress on adolescent development.

### **Implications for Educational Practice and Intervention**

The robust evidence linking parenting styles to self-regulation development carries significant implications for educational practice and family intervention programs. Schools represent critical settings where educators can support self-regulation development through practices that complement and potentially compensate for parenting influences. Educational approaches emphasizing student autonomy support, warm teacher-student relationships, and developmentally appropriate structure mirror the characteristics of

authoritative parenting and have been shown to promote self-regulation and academic engagement.

School-based programs teaching emotion regulation skills represent promising interventions for adolescents who may not receive adequate emotion coaching at home. Curricula teaching specific strategies such as cognitive reappraisal, mindfulness, and problem-solving have demonstrated effectiveness in enhancing adolescent self-regulation and reducing emotional and behavioral problems. Such programs prove particularly beneficial for adolescents experiencing authoritarian, permissive, or neglectful parenting, as they provide compensatory skill development opportunities.

Family-based interventions targeting parenting practices represent another essential strategy for promoting adolescent self-regulation development. Programs teaching authoritative parenting skills, including positive communication, appropriate limit-setting, emotion coaching, and autonomy support, have demonstrated effectiveness across diverse cultural contexts. The U.S. Department of Health and Human Services has identified several evidence-based practices for promoting self-regulation in adolescents and young adults, emphasizing the importance of: (1) creating supportive environments with clear expectations; (2) teaching specific self-regulation skills through modeling and practice; (3) providing opportunities for autonomy and decision-making within appropriate boundaries; and (4) fostering positive relationships with caring adults who serve as regulatory role models.

Culturally-adapted interventions prove essential for maximizing program effectiveness across diverse populations. Programs must respect cultural values regarding family relationships, authority, and independence while promoting core authoritative parenting dimensions of warmth, structure, and developmentally appropriate autonomy support. Community-based participatory approaches involving families in program design and implementation enhance cultural relevance and family engagement.

Integration of parenting support within school-based services represents an efficient strategy for reaching families and promoting consistency

between home and school environments. Family engagement programs, parent education workshops, and home-school communication systems can align parenting practices with educational goals for promoting self-regulation development. Universal programs offered to all families normalize participation and reduce stigma, while more intensive services can be provided to families facing particular challenges.

## DISCUSSION

This systematic review of recent literature reveals robust and consistent evidence that parenting styles significantly influence self-regulation development during adolescence, with authoritative parenting demonstrating clear advantages for promoting optimal regulatory capacities across emotional, behavioral, and cognitive domains. These findings align with and extend previous theoretical frameworks emphasizing the critical role of family socialization practices in shaping developmental competencies that support academic achievement, psychological well-being, and social adaptation.

The superiority of authoritative parenting for promoting self-regulation development can be understood through multiple complementary theoretical mechanisms. First, the high warmth characteristic of authoritative parenting creates a secure emotional base from which adolescents can explore their environments and develop autonomy. Attachment theory suggests that secure parent-child relationships foster confidence in one's capacity to manage challenges, promoting approach rather than avoidance coping strategies. Second, the appropriate structure and clear expectations provided by authoritative parents help adolescents internalize behavioral standards and develop the capacity for self-directed goal pursuit. Social learning theory emphasizes that adolescents develop self-regulation through observing and internalizing the behavioral standards modeled by parents who consistently but not punitively enforce rules. Third, the autonomy support central to authoritative parenting promotes development of intrinsic motivation and self-determined behavior regulation, as self-determination theory predicts that satisfaction of autonomy needs facilitates

internalization of values and development of autonomous self-regulation.

The identification of emotion regulation as a critical mediating mechanism represents an important theoretical advancement. This finding suggests that parenting styles influence self-regulation development not only through direct behavioral management but also by shaping adolescents' capacity to understand, modulate, and effectively express emotions. Authoritative parents serve as emotion coaches who help adolescents label feelings, understand emotional causes and consequences, and develop adaptive strategies for managing emotional experiences. This emotion socialization process provides adolescents with essential skills for navigating the heightened emotional intensity characteristic of adolescence. Conversely, authoritarian parents who dismiss or punish emotional expression may inadvertently teach emotion suppression or avoidance strategies that prove maladaptive over time. Permissive parents who empathize with adolescent emotions but fail to teach regulatory strategies may leave adolescents feeling overwhelmed by intense feelings without adequate tools for management.

The bidirectional relationships identified in longitudinal research underscore the importance of adopting transactional developmental models that recognize adolescents as active agents who shape their own developmental contexts. While parents certainly influence adolescent self-regulation development, adolescents' regulatory capacities and behavioral choices also influence subsequent parenting. Adolescents who demonstrate good self-control and prosocial behavior may elicit more warmth and autonomy-granting from parents, while those struggling with regulatory deficits may evoke more controlling or hostile parenting responses. These reciprocal influences create developmental cascades where initial small differences amplify over time through feedback loops. Intervention efforts must recognize these bidirectional processes and address both parenting practices and adolescent skills simultaneously.

The cross-cultural evidence reviewed highlights both universal patterns and important cultural variations in how parenting practices relate to self-regulation development. The consistent finding that

warmth and support predict positive outcomes across diverse cultural contexts suggests that adolescents universally benefit from experiencing parental care and acceptance. However, the optimal balance of structure and autonomy support appears to vary somewhat across cultural contexts reflecting different values regarding independence, family obligation, and authority. These cultural variations underscore the importance of developing culturally-adapted assessment tools and intervention programs that respect diverse family values while promoting core developmental goals.

Several limitations of the current literature merit acknowledgment and suggest directions for future research. First, while recent studies have begun examining mediating mechanisms such as emotion regulation, additional research is needed to understand other pathways through which parenting influences self-regulation, including cognitive mechanisms such as metacognition and executive functions, and neurobiological processes including prefrontal cortex development and stress response systems. Second, most existing research relies on cross-sectional or short-term longitudinal designs that limit causal inference. Long-term longitudinal studies following adolescents across multiple years would provide stronger evidence regarding developmental trajectories and enable examination of sensitive periods when parenting may exert particularly strong influences. Third, greater diversity is needed in research samples, as most studies have been conducted in middle-class populations within relatively limited geographic regions. Research with socioeconomically diverse families, immigrant populations, and families facing particular stressors would enhance understanding of how contextual factors moderate parenting effects.

From an applied perspective, the findings reviewed carry important implications for practitioners, educators, and policymakers working to support adolescent development within educational contexts. Schools can play essential roles in promoting self-regulation both directly through curricula teaching regulatory skills and indirectly through family engagement programs supporting authoritative parenting practices. Universal school-based programs teaching emotion regulation, problem-solving, and goal-setting skills provide all

adolescents with foundational competencies while particularly benefiting those not receiving adequate socialization at home. Teacher training emphasizing warm relationships, appropriate structure, and autonomy support helps educators create classroom climates mirroring authoritative parenting and promoting student self-regulation.

Family engagement initiatives represent essential complements to school-based efforts. Programs must move beyond traditional parent involvement emphasizing volunteering and homework support to address parenting practices directly influencing self-regulation development. Evidence-based parenting programs teaching authoritative skills have demonstrated effectiveness but often struggle with engagement, particularly among stressed families who might benefit most. Strategies for enhancing participation include offering programs during convenient times, providing childcare and transportation, using engaging formats, involving adolescents alongside parents, and creating welcoming non-judgmental atmospheres. Integration of parenting support within existing school services such as parent-teacher conferences and school counseling reduces barriers and normalizes participation.

Community-level interventions addressing broader contextual factors affecting families represent additional important strategies. Policies supporting economic security, access to mental health services, safe neighborhoods, and quality childcare reduce stressors that undermine parenting capacity. Public education campaigns raising awareness about the importance of authoritative parenting and specific strategies for implementation can reach families not participating in formal programs. Collaborations among schools, community organizations, healthcare providers, and social services create comprehensive support systems promoting positive parenting and adolescent development.

This review contributes to constructing a multidisciplinary framework for global education by demonstrating that educational goals for promoting student learning and development cannot be achieved without attention to family contexts and parenting practices that shape foundational self-regulatory capacities.



Educational systems worldwide are increasingly recognizing that academic achievement depends not only on cognitive skills but also on socio-emotional competencies including self-regulation, persistence, emotional management, and social cooperation. Parents serve as primary teachers of these competencies through the emotional climate they create, the behavioral standards they establish, and the autonomy they promote. Educational policies and practices must therefore extend beyond classroom walls to support families in providing developmental contexts that promote self-regulation and other essential competencies for success in school and life.

### CONCLUSION

This systematic review demonstrates that parenting styles exert substantial and differentiated influences on self-regulation development during adolescence, with authoritative parenting characterized by warmth, appropriate structure, and autonomy support consistently predicting optimal regulatory outcomes across emotional, behavioral, and cognitive domains. Emotion regulation emerges as a critical mediating mechanism through which parenting practices influence broader adjustment and mental health. While these general patterns demonstrate remarkable consistency across diverse cultural contexts, important variations exist in how specific parenting practices manifest and relate to developmental outcomes in different cultural settings.

The findings carry significant implications for educational practice and policy within global education frameworks. Schools can promote self-regulation development through curricula teaching regulatory skills, classroom practices mirroring authoritative parenting, and family engagement programs supporting positive parenting practices. Culturally-adapted, evidence-based parenting interventions represent essential strategies for promoting adolescent development, particularly when integrated within comprehensive school-based services. Future research should employ longitudinal designs examining developmental trajectories, investigate neurobiological and cognitive mechanisms mediating parenting effects, and include socioeconomically and culturally

diverse samples to understand contextual moderators.

Ultimately, promoting optimal self-regulation development in adolescents requires collaborative efforts among families, schools, communities, and policymakers to create supportive developmental contexts. By understanding how parenting practices shape regulatory capacities that enable academic achievement and psychological well-being, stakeholders can work together to support all adolescents in developing the self-regulatory competencies essential for success in education and life. This multidisciplinary integration of psychological insights with educational practice represents a critical step toward achieving global education goals emphasizing holistic student development within culturally-responsive frameworks.

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### DECLARATION OF POTENTIAL CONFLICT OF INTEREST

The authors do not work for, consult, own shares in, or receive funding from any company or organization that would benefit from this manuscript, and have disclosed no affiliations other than those noted above.

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