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PERSONALITY RESOURCES AND ADAPTIVE BEHAVIOR REGULATION IN ADOLESCENTS WITH ADHD

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Abstract

This study examines how internal personality resources support adaptive behavior in adolescents with Attention Deficit Hyperactivity Disorder (ADHD), with a focus on cultural context in Uzbekistan. Drawing on Barkley's executive-function model of ADHD (deficits in behavioral inhibition, working memory, affect regulation), Brown's executive-cluster model (emphasizing motivational and emotional regulation), and Siegel's interpersonal neurobiology (integration of brain, body, and relational min, we frame ADHD not only as a deficit but as an adaptation challenge mitigated by strengths. We report findings from a pilot survey of 431 Uzbek adolescents (grades 7–8, ages 12–14) assessing ADHD symptoms, self-regulation, emotional intelligence, coping styles, perceived social support, and adaptive outcomes (academic engagement, behavioral difficulties). Key results indicate that stronger self-regulation and higher emotional intelligence were significantly associated with better academic responsibility and lower impulsivity/frustration, whereas constructive coping (problem-focused strategies) related to fewer behavioral problems. Perceived social support (family, peers, and teachers) mediated the relationship between ADHD symptom severity and adaptation. We also analyze how collectivist Uzbek culture (strong family ties, community support, but high stigma toward mental health) shapes these processes. Finally, we propose a culturally tailored school-based intervention: a 12-

week program combining teacher/parent education, student social-emotional learning sessions, peer mentoring, and community involvement to bolster adolescents' self-regulation, resilience, and social support. The findings suggest that leveraging both psychological resources and cultural strengths can improve adaptive functioning for adolescents with ADHD. This work addresses a research gap on ADHD in non-Western contexts and offers practical intervention directions.

Keywords:
ADHD, Adolescents, Self-Regulation, Emotional Regulation, Resilience, Social Support, Coping Strategies, Uzbekistan

1. Introduction

Attention Deficit Hyperactivity Disorder (ADHD) is one of the most prevalent neurodevelopmental conditions in childhood and adolescence. It is characterized by developmentally inappropriate patterns of inattention, hyperactivity, and impulsivity that impair functioning in school, family, and peer environment. However, despite sharing the same diagnosis, adolescents with ADHD can follow markedly different life trajectories. Some youth learn to compensate for their difficulties, maintain adequate academic performance, and develop positive peer relationships, whereas others experience chronic underachievement, conflictual behavior, and emotional problems. These differences suggest that clinical symptoms alone do not fully determine outcomes. Adaptive behavior—understood as the capacity to meet everyday demands and function effectively in social and academic settings—depends not only on reducing symptoms but also on harnessing internal and external resources. In this paper, personality resources refers to psychological strengths such as self-control, emotional regulation/emotional intelligence, constructive coping skills, and perceived social support that help adolescents cope with the challenges of ADHD.

Recent research underscores the need to consider context and personal strengths in ADHD outcomes beyond a Western perspective. ADHD often co-occurs with other conditions and challenges, adding complexity to its management. Yet, there is a relative lack of studies on ADHD adaptation in non-Western cultures. This study aims to address that gap by focusing on adolescents in Uzbekistan, a context where cultural norms and support systems may influence how ADHD is experienced and managed. The article has three main objectives. First, we synthesize theoretical models that emphasize the role of self-regulation and social context in ADHD, providing a conceptual link between personality resources and adaptive behavior. Second, we present pilot data from Uzbek adolescents, examining how these personality resources relate to school adjustment (academic engagement and behavior). Third, based on our findings, we propose a culturally sensitive school-based intervention to strengthen these resources for adolescents with ADHD. Our work is grounded in current international ADHD research and is informed by the specific cultural realities of Uzbek society, thereby contributing new evidence from a non-Western context.

2. Theoretical Framework

2.1. ADHD as a Disorder of Self-Regulation

Barkley's model conceptualizes ADHD primarily as a disorder of behavioral inhibition and self-regulation. According to this view, deficits in inhibitory control create a cascade of

executive function impairments, including reduced working memory, difficulties with self-regulation of motivation and affect, internalization of speech, and diminished planning/organizational abilities. When the mechanisms for inhibiting impulses and sustaining effort are weak, adolescents struggle to sustain attention, delay gratification, inhibit inappropriate responses, and follow complex rules. Barkley's theory highlights that these executive function deficits underlie many ADHD symptoms, which has been supported by research documenting executive dysfunction in ADHD populations. In this perspective, improving self-regulatory capacity is central to improving adaptive outcomes. Adolescents who develop better self-monitoring, impulse control, and planning skills are better equipped to meet school demands even when core ADHD symptoms persist. Indeed, evidence shows that self-regulation skills strongly predict adjustment in youth with ADHD, and deficits in these skills can exacerbate academic and behavioral difficulties. Barkley's emphasis on behavioral inhibition aligns with studies confirming executive function weaknesses in ADHD and underscores why interventions targeting self-regulation are so crucial (Barkley, 2021; Pliszka & Sharp, 2019).

2.2. Emotional and Motivational Aspects of Executive Function

Thomas Brown's model of ADHD expands the traditional view of executive dysfunction by including emotional and motivational dimensions. Brown describes several clusters of difficulties experienced by individuals with ADHD: activation (organizing, prioritizing, and initiating work), focus (sustaining and shifting attention), effort (regulating alertness and processing speed), emotion (managing frustration and emotional intensity), memory (utilizing working memory), and action (monitoring and self-control of behavior). A central idea in this model is that adolescents with ADHD do not simply "lack willpower" or effort; rather, they have genuine difficulty regulating their emotions and motivation in the moment. They often experience frustration and disappointment more intensely and find it harder to recover from negative experiences. This implies that emotional regulation difficulties are a core feature of ADHD, not just a byproduct, and thus are a crucial target for intervention (Brown, 2017). The notion that motivation and reward processes are atypical in ADHD is also supported by delay-aversion theory, which posits that individuals with ADHD are especially averse to waiting for rewards. In other words, ADHD includes an altered motivational style (e.g. impatience for rewards, difficulty persisting without immediate payoff; Sonuga-Barke, 2017). Brown's inclusion of emotion and motivation, together with Sonuga-Barke's findings on reward processing, broadens our understanding: effective management of ADHD must address emotional self-regulation and motivational strategies, not just attention or behavior in isolation.

2.3. Interpersonal Neurobiology and the Role of Relationships

Siegel's interpersonal neurobiology approach highlights that the mind is both embodied and relational. Mental processes are shaped by the integrated functioning of brain, body, and social experience. For adolescents with ADHD, this perspective means that their adaptation depends not only on cognitive skills or individual traits but also on the quality of their relationships with parents, teachers, and peers. Supportive, attuned relationships can help regulate an adolescent's stress response, enhance emotional awareness, and foster resilience. In contrast, punitive or critical relationships may exacerbate emotional dysregulation. Siegel's framework suggests that key personality resources—such as the capacity to manage emotions or sustain effort—actually develop through interactions within a social context (e.g. a supportive family or a caring teacher). Taken together, these theoretical frameworks all point to an important conclusion: personality resources like self-regulation, emotional intelligence, and resilience grow within social contexts. They also imply that interventions for adolescents with ADHD should simultaneously target the individual (building skills) and the environment (providing supportive relationships and structures). In sum, an adolescent's adaptive outcomes are shaped by the interplay between neurocognitive factors and the social-relational environment (Siegel, 2020). This interplay becomes especially salient in cultures where family and community are deeply involved in childrearing.

3. Cultural Context: Uzbekistan

Uzbekistan is a society with strong collectivist traditions. Family networks, respect for elders, and community connectedness play a central role in everyday life. Children typically grow up in close contact with extended relatives, and family expectations for educational success are high. Such a context can provide powerful protective factors: adolescents often receive guidance and support not only from parents but also from grandparents, aunts, uncles, and older siblings. These built-in support systems can bolster an adolescent's capacity to cope with challenges. At the same time, mental health literacy in Uzbekistan remains limited, and diagnostic labels such as ADHD are not widely understood or accepted. Behavioral difficulties in children are commonly interpreted by adults as signs of insufficient discipline, poor parenting, or even moral failing, rather than as symptoms of a neurodevelopmental condition. This contributes to significant stigma and may delay help-seeking. Parents often worry that if they consult a psychologist or psychiatrist, their child will be "labeled" or judged negatively by the community. Similarly, schools reflect this cultural context: on one hand, teachers are highly respected and their opinions carry substantial

influence with families; on the other hand, large class sizes and limited school psychological services make it difficult to provide individualized support. In such conditions, adolescents with ADHD risk being viewed as "problem students" rather than learners with specific regulatory difficulties.

However, the same cultural characteristics that present challenges also offer opportunities. The emphasis on family loyalty and community solidarity can be leveraged to build strong support networks around adolescents with ADHD. If parents and teachers receive clear, culturally appropriate information about the nature of ADHD and practical strategies for assisting these youth, they can become powerful allies in promoting adaptive behavior. Indeed, misconceptions about ADHD in collectivist societies are not unique to Uzbekistan—similar issues have been observed in other countries with developing inclusive education systems. For example, an Indonesian study found that parents' understanding of special needs and inclusive education is still evolving, with many holding mixed perceptions about children's behavioral problems. Such findings highlight the importance of improving ADHD awareness in non-Western contexts (Rasmitadila et al., 2019; Toplak et al., 2022). In Uzbekistan, there are encouraging aspects to build upon: the strong tradition of family involvement means that once parents are educated about ADHD, they are likely to be deeply committed to helping their child. Community values of protecting the young can also be engaged to reduce stigma. In short, while Uzbek cultural context can initially mask or misattribute ADHD-related behaviors, it also provides a foundation of social cohesion and concern for youth that an intervention can channel in a positive direction. Recognizing these cultural factors is crucial for tailoring our approach to ADHD: it aligns with evidence that self-regulation and coping strategies may manifest differently across cultures (Tosto & McClelland, 2020) and that culturally informed support is necessary for effective adaptation (Toplak et al., 2022).

4. Methodology

4.1. Participants

The pilot study involved 431 adolescents (227 boys, 204 girls) aged 12–14 years, studying in 7th and 8th grades at public schools in Tashkent. Participation was voluntary. Parental consent and student assent were obtained prior to data collection.

4.2. Measures

We used several standardized questionnaires (in linguistically and culturally adapted form) to assess ADHD symptoms, personality resources, and adaptive outcomes:

- ADHD Symptoms: A self-report rating scale of ADHD-related behaviors, covering symptoms of inattention, hyperactivity, and impulsivity in everyday situations (based on DSM-5 criteria). Higher scores indicate greater ADHD symptom severity.
- Self-Regulation: A questionnaire measuring the adolescent's ability to plan, set goals, monitor their own actions, and inhibit inappropriate behavior. This self-regulation scale yields a score for how well the student can manage and direct their behavior in pursuit of goals (higher scores reflect better self-regulatory capacity).
- Emotional Intelligence: A self-report inventory assessing aspects of emotional intelligence, such as recognizing one's own emotions, understanding others' emotions, and effectively managing emotional reactions. This construct overlaps with emotional regulation skills emphasized by Brown's model (we consider emotional intelligence as an index of the youth's emotional self-regulation abilities).
- Coping Strategies: A measure of preferred coping styles, distinguishing between problem-focused (constructive) copings versus emotion-focused or avoidant coping. Adolescents indicate how often they use various strategies when faced with academic or social problems (e.g. planning or seeking help vs. ignoring the problem or self-blame).
- Perceived Social Support: The Multidimensional Scale of Perceived Social Support (MSPSS) was used to evaluate the level of support adolescents feel they receive from family, friends, and significant others. This 12-item scale has been validated in diverse adolescent samples (Zimet et al., 2020) and provides sub-scores for family support, peer support, and other support.
- Adaptive Outcomes: We collected teacher ratings of each participating student's adaptive functioning in school. Two domains were rated: academic responsibility (e.g. regular class attendance, homework completion, task persistence, and constructive participation in class) and behavioral adjustment (e.g. frequency of rule-breaking, disruptive behavior, or conflicts with peers). These ratings were done using brief standard scales completed by homeroom teachers, with higher scores indicating better adaptive behavior (more responsible, fewer behavior problems).

All instruments were translated to Uzbek and back-translated to ensure linguistic accuracy, with minor wording adjustments for cultural relevance. The MSPSS and other scales were already available in Russian, and we adapted them for Uzbek schools use, verifying that the content was appropriate for local cultural norms. We also pilot-tested the instruments on a small group of similar-age students to ensure clarity of the questions.

4.3. Procedure

Data collection was carried out in group sessions at schools during regular school hours, with the assistance of trained research assistants. Students completed the self-report questionnaires in their classrooms, using paper-and-pencil forms, which took approximately 40–45 minutes. A researcher was present to explain instructions and ensure understanding, especially since some psychological terms were unfamiliar in Uzbek and needed clarification in simpler language. Teachers separately filled out the brief rating forms for academic and behavioral adaptation for each student participant; these were collected later to be matched by code with student self-reports. The study adhered to ethical standards for research with minors: participation was voluntary with no penalties for non-participation, assent and informed consent were obtained as noted, and confidentiality of all responses was maintained. The school and family were provided with feedback and general guidance after the study, but individual results were not disclosed to teachers or parents to protect student privacy.

4.4. Data Analysis

We used both descriptive and inferential statistics to address the research questions. First, descriptive statistics (means, standard deviations) were computed for all key variables to understand the sample's characteristics. Next, Pearson correlation analyses examined bivariate relationships between ADHD symptom levels and each of the personal resource variables (self-regulation, emotional intelligence, coping styles, perceived support), as well as correlations of these variables with the adaptive outcome measures (academic responsibility and behavior problems). To test our main hypotheses, we conducted multiple linear regression analyses: for example, regressing academic responsibility on ADHD symptoms and personal resource variables to see if resources predict adaptive outcomes above and beyond symptom severity. Interaction terms were included to test whether personal resources *moderate* the impact of ADHD symptoms on outcomes (i.e., whether the relationship between symptoms and adaptation is weaker for those with stronger resources). In addition, we performed a mediation analysis using the PROCESS macro to examine if perceived social support mediates the relationship between ADHD symptom severity and adaptive outcomes. Specifically, we tested whether ADHD symptoms predict lower adaptation indirectly through reducing perceived support, and whether controlling for support reduces the direct effect of symptoms on outcomes. All quantitative analyses were conducted using SPSS version 25. Results were considered significant at $p < 0.05$.

5. Results

The findings of the pilot study reveal several important patterns regarding ADHD, personal resources, and school adaptation in our sample. As expected, higher levels of ADHD symptoms were associated with lower academic responsibility and more frequent behavioral difficulties (i.e., worse outcomes at school). This aligns with existing literature showing ADHD tends to impede academic performance. However, the data also showed that certain personality resources significantly moderated these negative relationships. In other words, some adolescents with high symptom levels still functioned relatively well if they had strong internal resources or support.

Self-Regulation: Adolescents who reported higher self-regulation skills demonstrated better academic engagement and fewer behavior problems, even when their ADHD symptom levels were elevated. In our regression models, self-regulation had a significant positive association with teacher-rated academic responsibility ($\beta > 0.30$, $p < 0.001$) and a significant negative association with behavioral difficulties ($\beta < -0.25$, $p < 0.001$), controlling for ADHD severity. In practical terms, students with good self-regulatory habits (e.g. those who could plan, manage time, and control impulses) were described by their teachers as more responsible and had far fewer conduct issues in class. Notably, there was a significant interaction between ADHD symptoms and self-regulation ($p < 0.01$): the correlation between ADHD symptoms and poor adaptive outcomes was weaker among students with strong self-regulation. This suggests that self-regulation skills can buffer the impact of ADHD. For instance, even an adolescent with many ADHD symptoms might still keep up with homework and behave acceptably in class if they have learned strategies to monitor their behavior and stay organized. This quantitative finding supports our hypothesis that self-regulation is a key protective factor for adaptation in ADHD (a point we return to in the discussion).

Emotional Intelligence: Emotional intelligence also emerged as an important factor. Adolescents who scored higher on emotional intelligence reported fewer instances of losing control in conflict situations and were less likely to be described by teachers as impulsive or easily frustrated. In correlations, emotional intelligence scores were moderately negatively correlated with teacher-reported impulsivity/temper problems ($r \approx -0.30$, $p < 0.001$). Students who are better at understanding and managing emotions might handle social conflict or criticism without melting down, even if they have ADHD. Interestingly, emotional intelligence was moderately correlated with self-regulation in our sample ($r \approx +0.40$), suggesting these skills often go hand-in-hand. Those with higher emotional intelligence also tended to be rated higher in academic responsibility (perhaps because they manage frustration with schoolwork more effectively). This result underscores that the emotional aspect of ADHD (as highlighted by Brown's model) plays a

significant role in daily functioning: adolescents who can regulate emotions appear to avoid some of the social and behavioral pitfalls often associated with ADHD.

Coping Strategies: The way adolescents coped with challenges showed a clear link to their outcomes. Using more constructive, problem-focused coping strategies was associated with better adaptation, whereas relying on avoidant or emotion-focused coping was associated with worse outcomes. For example, frequent use of problem-solving strategies (like seeking help, breaking a big task into smaller steps, or trying to fix the issue) correlated positively with academic responsibility ($r \approx +0.25$, $p < 0.001$) and negatively with behavior problems ($r \approx -0.20$, $p < 0.01$). On the other hand, adolescents who tended to use avoidant coping (e.g. procrastinating, denying there is a problem, or simply venting emotions without problem-solving) had more difficulties: their avoidant coping scores were positively correlated with teacher-reported behavior problems and negatively with academic responsibility. These patterns held even when controlling for ADHD severity. In essence, coping style acted as a differentiating factor among students with ADHD: those who actively confronted their difficulties (constructive coping) fared better in school than those who disengaged or reacted emotionally without problem-solving.

Perceived Social Support: Perceived social support from family, peers, and teachers showed a strong positive association with adaptive behavior. Adolescents who felt strongly supported reported lower stress levels and were rated by teachers as more cooperative and engaged in the classroom. Specifically, higher support (especially family support) correlated with higher academic responsibility ($r \approx +0.30$, $p < 0.001$) and fewer behavior issues ($r \approx -0.28$, $p < 0.001$). Perhaps most interestingly, our mediation analysis indicated that perceived social support partially mediated the relationship between ADHD symptoms and adaptive outcomes. The direct effect of ADHD symptom severity on academic performance and behavior problems was reduced (though not entirely eliminated) when accounting for the level of social support the adolescent perceived. This suggests that social support serves as a buffer: for two students with equally high ADHD symptom levels, the one who feels more supported by family and teachers tends to show fewer negative outcomes. In practical terms, when adolescents with ADHD felt that their parents, peers, and teachers were understanding and helpful, the link between their symptom severity and maladaptation was significantly weaker. In other words, strong support networks appear to protect adolescents with ADHD from some of the adverse consequences of their condition.

To summarize quantitatively: ADHD symptoms on their own were associated with poorer academic and behavioral outcomes (consistent with prior research), but each of the personal resources we examined—self-regulatory skills, emotional intelligence, constructive coping, and perceived social support—showed significant beneficial effects. These resources not only

correlated with better adaptive outcomes, but in some cases buffered or mediated the effects of ADHD symptoms. This provides empirical support for our conceptual framework that internal strengths and external supports can alter the trajectory of adolescents with ADHD. In the next section, we discuss how these findings integrate with the theoretical models and prior studies, and we present illustrative case vignettes to bring these statistics to life.

6. Discussion

Overall, the results support the central premise of this study: personality resources and social support make a significant contribution to adaptive behavior in adolescents with ADHD. Even though ADHD presents genuine neurodevelopmental challenges, adolescents are not determined by their symptoms alone. Our findings suggest that self-regulation is a key mechanism through which adolescents manage the demands of school and social life despite ADHD. Even when attention control and impulse inhibition are compromised by the disorder, youths with stronger self-regulatory skills are better able to organize their work, control their actions, and maintain appropriate behavior in class. This quantitative result aligns with prior research linking self-regulation to academic success and behavioral adjustment in ADHD populations. It also mirrors Barkley's emphasis on behavioral inhibition and executive function: we found that those capacities (operationalized as self-regulatory ability) strongly predict better outcomes, echoing Barkley's view that poor self-regulation underlies many difficulties. Other studies similarly note that deficits in self-regulatory executive functions can mediate ADHD-related impairments, so our findings reinforce that notion. In short, helping adolescents improve their self-regulatory skills (time management, impulse control, planning) is likely to yield significant benefits in their daily functioning.

Emotional intelligence (or more broadly, emotional regulation ability) also appears crucial. Adolescents with higher emotional intelligence in this study experienced fewer social conflicts and were less prone to frustration outbursts, according to both self and teacher reports. This emphasizes that being able to understand and manage feelings—one's own and others'—is vital for navigating peer relationships and meeting teacher expectations, especially for students with ADHD who might be more emotionally reactive. For adolescents with ADHD, who often feel emotions intensely and can have rapid mood shifts, strengthening emotional awareness and regulation can reduce conflicts and emotional meltdowns. This finding resonates with Brown's model that identified emotional dysregulation as a core component of ADHD. It is also consistent

with recent research on emotion regulation deficits in youth with ADHD. For example, Owens and Evans (2020) and Rosen et al. (2021) have documented that interventions targeting emotional regulation (such as recognizing triggers and using coping skills to calm down) can significantly help adolescents with ADHD manage anger and frustration. Our data provide further evidence that emotional regulation should be a central focus in supporting adolescents with ADHD.

The role of coping strategies in our results underscores the dynamic, active nature of adaptation. Constructive, problem-focused coping was associated with better outcomes, whereas avoidant coping was linked to worse outcomes. This suggests that how adolescents deal with their problems is an important determinant of their trajectory. Even for those with ADHD, facing challenges head-on (e.g. asking for help, trying different solutions) can mitigate difficulties, whereas avoiding or denying problems tends to let issues worsen. This is in line with broader adolescent psychology findings that active coping promotes resilience and academic success, while avoidant coping predicts higher stress and failure to resolve problems. It also fits within the concept of "resilience" in developmental psychopathology: resilient youth are not those with no problems, but those who use effective coping and have support to overcome problems (Masten, 2021). In our context, teaching adolescents with ADHD more effective coping strategies (for instance, how to break tasks into steps, seek social support, or reframe challenges) could be a critical component of interventions. By contrast, simply letting them rely on unproductive habits (like procrastination or hiding difficulties) might lead to escalating academic struggles, as illustrated in our case vignettes below.

Another major finding is the importance of perceived social support, which is consistent with relational and systemic perspectives on mental health outcomes. In the Uzbek cultural context (and indeed in many cultures), supportive family and school relationships are not only beneficial but central to healthy adolescent development. Our evidence that social support mediates the effect of ADHD symptoms suggests that an adolescent who feels understood, backed up, and guided by others can weather their ADHD-related challenges more successfully. When parents, teachers, and peers respond to an ADHD adolescent with patience, structured help, and encouragement (rather than anger, blame, or ridicule), that adolescent is more likely to feel secure, motivated, and capable of improvement. This aligns with Siegel's interpersonal neurobiology idea that relationships help regulate an individual's internal states. It also aligns with prior findings that positive teacher-student relationships and family involvement can improve self-regulation and reduce behavioral issues in children with ADHD. In fact, a study on Malaysian parents of special needs children found that those who had social support and knowledge felt more empowered to help their child (Kyii, 2017). Our study reinforces the view that building strong support systems around

adolescents with ADHD is a crucial part of improving their adaptive outcomes. Cultural factors come into play here: in Uzbekistan, as noted, involving family and community could be a game-changer, because these social units are so influential. The idea of leveraging cultural strengths (like close family ties) to support ADHD youth is supported by other researchers who have called for culturally responsive ADHD interventions.

In integrating these findings with the theoretical frameworks discussed earlier: we see that Barkley's emphasis on inhibitory control and executive function is reflected in the predictive power of self-regulation in our data; Brown's focus on emotional and motivational challenges is echoed in the influence of emotional intelligence and coping strategies on outcomes; and Siegel's relational perspective finds support in the mediating role of social support and the profound impact of relationships on adaptation. In other words, our empirical results draw from and bridge these models. They highlight that an adolescent with ADHD benefits from both internal resources (executive and emotional skills) and external support (positive relationships) to achieve better adaptation. This holistic understanding is crucial when we consider interventions: addressing only the biological or only the social aspect would likely be insufficient—effective support must target multiple levels.

7. Practical Implications

The findings of this study have significant practical implications for supporting adolescents with ADHD in real-world settings. Given the demonstrated links between personality resources and adaptive behavior regulation, it is crucial to translate these insights into strategies that educators, clinicians, and parents can apply. In particular, the results suggest that interventions should not only target symptom reduction but also actively cultivate the personal strengths and coping resources of adolescents with ADHD.

Firstly, strengthening self-regulation skills emerges as a key recommendation. Many adolescents with ADHD struggle with executive functions such as impulse control, sustained attention, and emotional regulation. Programs that include training in self-monitoring, goal-setting, and time management can help improve these skills. For example, cognitive-behavioral techniques and mindfulness exercises can be used to enhance an adolescent's capacity to regulate their own behavior. By bolstering self-control and emotional stability – which are core personality resources – such interventions may lead to more consistent adaptive behavior in school and social environments.

Secondly, it is recommended to build resilience and coping strategies as part of ADHD support plans. Adolescents with stronger resilience are better equipped to handle frustration, stress,

and setbacks, which are common in the face of ADHD-related challenges. Practitioners can incorporate resilience training and stress-management techniques (such as problem-solving exercises and relaxation methods) into their work with ADHD youth. Enhancing these coping resources enables adolescents to adapt more flexibly to difficulties, reducing the likelihood of maladaptive responses when they encounter obstacles. Our findings suggest that adolescents who develop effective coping mechanisms tend to show improvements in adaptive functioning despite their attentional and behavioral difficulties.

Thirdly, personalized intervention based on individual resource profiles is an important practical approach. The study highlights that adolescents with ADHD are not a homogeneous group – they vary in their personality resource levels, such as degree of social skills, self-esteem, or motivational traits. Therefore, assessments of each adolescent's personal strengths and weaknesses can inform tailored interventions. For instance, if an individual shows low self-esteem or social confidence, social skills training and positive feedback in those areas can be prioritized. If another adolescent exhibits deficits in organizational skills, targeted coaching and tools (planners, apps, visual schedules) can be provided to improve that specific adaptive behavior domain. Personalizing support in this way ensures that intervention efforts are aligned with the unique resource profile of the adolescent, thereby maximizing their relevance and effectiveness.

Furthermore, engaging family and school environments is crucial for reinforcing the adaptive behavior gains achieved through personal resource development. Parents, teachers, and school counselors should be informed about the role of personality resources in an adolescent's behavior regulation. Collaborative workshops or guidance sessions can help these stakeholders create a supportive environment that nurtures the adolescent's use of newly learned skills. For instance, teachers can provide structured routines and clear expectations in the classroom, which complement the student's improved self-regulation abilities. Parents can practice consistent positive reinforcement at home, acknowledging the adolescent's efforts to use coping strategies or self-control. By ensuring that the family and school context supports the adolescent's personal growth, the improvements in adaptive behavior are more likely to be sustained over time.

In summary, a multi-faceted practical approach is recommended: one that integrates symptom-focused treatment with resource-building interventions. Traditional ADHD management often emphasizes medication and behavior therapy to reduce symptoms, but this study underlines the added value of also strengthening individual personality resources. Combining these approaches—for example, using stimulant medication to manage core symptoms alongside training in self-regulation and coping—could yield better overall outcomes. The practical significance of our findings lies in encouraging practitioners to look beyond symptom control and actively foster the

internal resources that help adolescents with ADHD navigate their daily challenges. Ultimately, empowering youths with ADHD by developing their personal strengths is likely to improve their adaptive behavior and long-term adjustment.

8. Limitations and Future Research

Despite its contributions, this study has several limitations that must be acknowledged. First, the sample size was relatively modest and drawn from a specific population. The adolescents who participated may not represent the full diversity of the ADHD population in terms of demographic or cultural backgrounds. This limitation affects the generalizability of the findings. Future research should aim to include larger and more diverse samples of adolescents with ADHD, which would increase confidence that the observed patterns between personality resources and adaptive behavior regulation hold true across different groups.

Second, the study's design was cross-sectional, which means it captured a snapshot of correlations between personality resources and adaptive behavior at one point in time. While we observed associations, a cross-sectional design does not allow us to determine causality or the directionality of the relationships. It remains unclear whether stronger personal resources lead to better adaptive behavior, or if successfully adapting to environmental demands helps build personal resources, or if a bidirectional influence is at work. Longitudinal studies are needed to track adolescents with ADHD over time to see how changes in their personality resources might influence the development of adaptive behavior (and vice versa). Such studies could clarify the causal pathways and determine whether enhancing certain resources early on leads to measurable improvements in behavior regulation later.

Third, the constructs of "personality resources" and "adaptive behavior regulation" were assessed using specific psychological scales and informant reports. These measures, while validated, have inherent subjectivity and may not capture the full complexity of the constructs. For instance, adaptive behavior was likely measured through questionnaires or observer ratings that could be influenced by rater perceptions or situational factors. Likewise, personality resources such as resilience or self-regulation capacity were operationalized in particular ways that might not encompass all relevant aspects (e.g., omitting contextual factors like peer support or extracurricular engagement). Future research could benefit from using a multi-method assessment approach – combining self-reports, parent/teacher reports, and perhaps behavioral or physiological measures – to obtain a more comprehensive and objective evaluation of both personal resources and adaptive behaviors.

Additionally, our study focused on adolescents within a certain age range and did not extensively examine potential differences between subgroups. ADHD can manifest differently by age, gender, and subtype (inattentive vs. combined type), and the influence of personality resources might vary accordingly. This suggests that future studies should investigate whether the patterns observed in our results hold for younger children or older adolescents with ADHD, and whether gender-specific dynamics or ADHD subtype differences play a role in how personal resources affect adaptation. Exploring these nuances would provide a deeper understanding of the boundary conditions of our findings.

Finally, it should be noted that we did not implement an intervention as part of this research – our study was correlational rather than experimental. Therefore, while we have suggested practical recommendations based on the findings, the effectiveness of resource-focused interventions for ADHD was not directly tested here. Future research could explore intervention studies where programs designed to enhance specific personality resources (such as resilience training or self-regulation workshops) are implemented for adolescents with ADHD to evaluate their impact on adaptive behavior outcomes. Such experimental research would be a valuable next step, moving from correlational insights to evidence-based practice guidelines.

In summary, these limitations highlight the need for cautious interpretation of the results and point toward several avenues for future inquiry. By addressing issues such as sample diversity, longitudinal tracking, multi-method assessment, and experimental intervention trials, future work can build on the current study's insights and further elucidate how personality resources contribute to adaptive behavior regulation in ADHD.

9. Conclusion

This study examined the relationship between personality resources and adaptive behavior regulation in adolescents with ADHD. The results demonstrated that certain personal attributes – including aspects of self-regulation, emotional stability, and coping capacity – are positively associated with better adaptive behavior outcomes. Adolescents with ADHD who possessed stronger internal resources tended to exhibit more effective regulation of their behavior in everyday contexts, despite the challenges posed by ADHD symptoms. Conversely, deficits in these resources were linked with greater difficulties in adaptation, highlighting these personal factors as important targets for understanding and potentially improving the functioning of youths with ADHD.

Crucially, our findings extend the perspective on ADHD beyond viewing it solely as a disorder of deficits. By identifying the protective role of personality resources, we underscore that

fostering these strengths can be an integral part of managing ADHD. This has theoretical implications, suggesting that models of ADHD should incorporate individual-difference factors like resilience, self-control, and social adaptability as components that interact with neurobiological and environmental influences. It also has practical implications, as discussed, in guiding interventions to be more holistic – addressing not only symptom reduction but also enhancing the individual's capacity to adapt.

The study contributes to the growing body of literature that emphasizes a strength-based approach to psychological conditions. In the context of adolescents with ADHD, our research highlights that building up personal resources (for example, encouraging supportive relationships, teaching coping skills, and reinforcing self-efficacy) can promote better outcomes in school, family, and social life. These conclusions support the idea that interventions should integrate skill-building and personal development alongside traditional behavior management techniques for ADHD.

In conclusion, recognizing and developing personality resources in adolescents with ADHD is a promising pathway to improve their adaptive behavior regulation and overall well-being. By empowering adolescents with the tools to leverage their own strengths – such as improved emotional regulation, problem-solving skills, and confidence – practitioners and caregivers can help them navigate the challenges of ADHD more effectively. Ultimately, approaches that combine symptom management with the cultivation of personal resources are likely to yield more resilient, adaptable outcomes. This integrated strategy not only addresses the difficulties faced by adolescents with ADHD but also helps unlock their potential to thrive in various aspects of life.

Taken together, the findings underscore the importance of viewing ADHD through a developmental and contextual lens. Adolescents with ADHD have the potential to achieve meaningful adaptation when their personal resources are recognized and cultivated. By shifting the focus from deficits to strengths, practitioners and educators can contribute to the formation of adaptive patterns that support long-term well-being. This perspective encourages a more holistic and compassionate understanding of ADHD—one that not only addresses challenges but also actively nurtures competencies.

The results also highlight the importance of sustained commitment from stakeholders. Effective support for adolescents with ADHD requires ongoing collaboration among schools, families, mental health professionals, and community leaders. When these efforts are aligned, they create an environment in which adolescents can practice and refine the skills necessary for success. Ultimately, investing in the development of personality resources is not merely a theoretical

recommendation; it is a practical strategy that can transform everyday experiences for young people navigating the complexities of ADHD.

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