

Preschool and Elementary Learners' Cognitive and Psychosocial Abilities and Its Influence on Their Attention Deficiency

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Abstract

This study examines the influence of cognitive and psychosocial abilities on attention deficiency among preschool and elementary learners diagnosed with ADHD in Regions XI and XII. Using a quantitative research design, data were collected from 60 students through standardized scales assessing cognitive engagement, memory strategies, coping mechanisms, and attention deficiencies. The findings indicate that while learners exhibit high cognitive engagement, particularly favoring hands-on, kinesthetic learning and multimodal instructional strategies, they also experience challenges in memory retention, especially with recalling specific details. Psychosocial abilities emerged as a significant predictor of attention deficiency, showing an inverse relationship—students with stronger psychosocial skills, such as emotional regulation, seeking social support, and engaging in physical activities, reported fewer attention deficiencies. Conversely, cognitive abilities were not found to be a significant predictor, suggesting that external environmental and emotional factors may play a more critical role in sustaining attention than cognitive skills alone. Regression analysis revealed that psychosocial abilities significantly impact attention deficiency, whereas cognitive abilities did not show a statistically significant relationship. These findings highlight the need for educational interventions that integrate multimodal learning strategies, structured memory aids, and social-emotional learning programs to enhance attention regulation. Additionally, further research is recommended to explore other potential predictors, such as classroom structure, parental involvement, and socioeconomic factors, to develop a more comprehensive approach to addressing attention deficiencies among young learners.

Keywords: pre-school and elementary learners, cognitive abilities, psychosocial abilities, attention deficiency, attention deficit hyperactivity disorder (ADHD)



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INTRODUCTION

Attention Deficit Hyperactivity Disorder (ADHD) is a neurodevelopmental condition characterized by persistent patterns of inattention, hyperactivity, and impulsivity that interfere with daily functioning and academic performance (Barkley, 1997). The presentation of ADHD varies with age, with symptoms often evolving as children grow (Offer & Albert, 2001). It is one of the most prevalent disorders among children, accounting to a significant proportion of cases in child psychiatry clinics. Research suggests that ADHD prevalence peaks during late childhood and early adolescence.

ADHD is widely recognized as a global concern, with studies estimating its prevalence at approximately 5–7% of children worldwide (Faraone et al., 2003). In the United States, ADHD is often perceived as a particularly American disorder due to its notably higher reported prevalence compared to other regions (Faraone et al., 2003). According to the US Centers for Disease Control and Prevention (2023), approximately 7 million (11.4%) children aged 3 to 17 years have been diagnosed with ADHD, with 36.5% of them also having learning disabilities. The large number of diagnosed cases demands a specialized healthcare services, educational support, and intervention programs.

Beyond the United States, ADHD also significantly impacts children's academic and social development in other countries. In Indonesia, students with ADHD face difficulties in completing assignments, staying focused, organizing tasks, following instructions, and bringing necessary materials to school (Hasan & Tripathi, 2014). Similarly, in the Philippines, managing ADHD presents unique challenges, particularly in a developing country context. Many families struggle to afford medications, therapies, and professional services necessary for effective management (de Castro, 2015). Without adequate support, children with ADHD may experience academic underperformance, social difficulties, and increased risks of physical injuries during early childhood (Lola et al., 2019).

According to the Special Education (SPED) Profile in the Philippines (2023), a study conducted by the United Nations Children's Fund (UNICEF) in 2022 reported that approximately 1.6 million Filipino children have disabilities. Data from the Department of Education (DepEd) for the 2016–2017 school year further indicate that 232,975 learners with disabilities were mainstreamed in regular classes, with 64,338 of them experiencing difficulties in remembering, concentrating, paying attention, and understanding. Of these, 34,896 (12.2%) were from Regions XI and XII, highlighting a critical need for targeted interventions in these areas.

Attention deficiency, a core characteristic of ADHD, significantly affects a learner's educational experience. Cognitively, children with attention difficulties often struggle with executive functions, which are essential for planning, organizing, and managing time effectively. These challenges hinder their ability to complete assignments, follow multi-step instructions, and meet deadlines. Difficulties with working memory further impair their capacity to retain and manipulate information, which is crucial for learning and problem-solving. Additionally, slower processing speeds can reduce academic performance across various subjects.

Psychosocially, ADHD-related attention deficiencies can complicate social interactions and emotional regulation within the school environment. Children may struggle to maintain conversations, interpret social cues, and form relationships with peers, potentially leading to feelings of isolation. Emotional dysregulation, including increased frustration, anxiety, or mood swings, can further disrupt classroom dynamics and learning. Behavioral issues, such as impulsiveness and hyperactivity, may result in conflicts with peers and teachers, impacting self-esteem and overall well-being.

Understanding these cognitive and psychosocial implications is essential for educators and school administrators to develop effective support strategies. Individualized education plans (IEPs), classroom accommodations, and social skills training are among the approaches that can help students with ADHD thrive both academically and socially. By fostering a more inclusive and supportive learning environment, schools can better address the needs of learners with attention deficiencies.

Building on these foundations, this study investigates the influence of cognitive and psychosocial abilities in shaping attention spans among preschool and elementary learners in Regions XI and XII. Cognitive abilities are examined as predictors due to their established role in executive function and academic performance (Shi & Qu, 2022). Similarly, psychosocial abilities are analyzed for their influence on emotional resilience, self-regulation, and adaptive coping mechanisms (Faulkner, 2020). By identifying key contributors to attention deficiency, this research aims to inform evidence-based interventions that support the cognitive and psychosocial development of young learners with attention deficiency in the Philippine educational context.

Statement of the Problem. The purpose of this study is to determine the influence of cognitive and psychosocial on attention deficiency in preschool and elementary learners. Specifically, to answer the following questions:

1. What is the level of cognitive abilities of preschool learners and elementary learners in terms of:
 - 1.1 learning; and,
 - 1.2 memory?
2. What is the level of psychosocial abilities of preschoolers and elementary learners in terms of:
 - 2.1 coping mechanism; and,
 - 2.2 leisure activity?
3. What is the level of attention deficiency of preschoolers and elementary learners in terms of:
 - 3.1 difficulty focusing; and,
 - 3.2 academic struggles?
4. Do cognitive and psychosocial abilities predict the attention deficiency of preschool and elementary learners?

LITERATURES

Cognitive Abilities and Attention Deficiency. Cognitive abilities, including memory, executive functioning, and information processing, play a crucial role in a child's ability to sustain attention. Attention deficiency has been linked to deficits in working memory, making it difficult for learners to retain and manipulate information (Gathercole et al., 2006). Executive function, which encompasses cognitive flexibility, inhibition control, and task switching, is often impaired in children with ADHD, leading to struggles with sustained focus and task completion (Diamond, 2020). Studies indicate that interventions targeting executive function, such as cognitive training and structured learning environments, can improve attentional capacities in young learners (Klingberg, 2018). Memory, a key component of cognitive abilities, significantly impacts attention regulation. Learners with poor short-term and working memory struggle to hold and process information, affecting their ability to stay engaged in tasks (Alloway & Alloway, 2019). Additionally, slow information processing speed can hinder a child's ability to respond quickly and efficiently to academic demands, increasing frustration and inattentiveness (Kail & Hall,

2019). Research has also highlighted that cognitive load—how much information a learner can handle at once—affects attention span, meaning that excessive cognitive demands can lead to overload and disengagement (Sweller, 2020).

Neurobiological studies suggest that cognitive deficiencies in attention-deficient learners stem from dysfunctions in the prefrontal cortex, the area responsible for executive control and self-regulation (Posner et al., 2019). This finding emphasizes the importance of cognitive interventions, such as structured learning environments, scaffolding techniques, and memory-enhancing strategies, to improve attentional control and learning outcomes (Gathercole et al., 2006).

Furthermore, research has shown that attentional control relies on an individual's ability to filter out irrelevant stimuli and sustain focus on pertinent tasks (Astle & Scerif, 2011). Children with weaker cognitive control mechanisms are more susceptible to external distractions, making it difficult for them to engage in sustained academic activities (Stevens & Bavelier, 2019). In addition, deficits in metacognitive skills, such as self-monitoring and goal setting, further exacerbate attention difficulties, as these processes enable learners to evaluate their progress and adjust strategies accordingly (Flavell, 2020).

Interventions designed to strengthen cognitive abilities have demonstrated promising results in enhancing attention span and learning outcomes. Cognitive training programs that focus on improving working memory and inhibitory control have been effective in mitigating attentional deficits in children with ADHD (Rapport et al., 2021). Additionally, structured environments that provide clear instructional scaffolding and minimize cognitive overload have been shown to improve attention and task performance (Swanson et al., 2018).

Psychosocial Factors and Their Influence on Attention. Beyond cognitive abilities, psychosocial factors significantly influence attention deficiency. Emotional regulation and

social interactions impact a child's ability to concentrate and process information efficiently (Reigal et al., 2020a). Children who engage in physical activities and maintain strong peer relationships demonstrate lower levels of attention-related difficulties (Faulkner, 2020). Furthermore, adverse childhood experiences, including stress and anxiety, have been associated with exacerbated attention problems in both preschool and elementary students (McLaughlin & Sheridan, 2016). These findings underscore the importance of integrating psychosocial support within educational interventions for children with attention deficiencies.

Theoretical Framework. This study is grounded in Barkley's Cognitive-Behavioral Model of ADHD (Barkley, 1997), which emphasizes deficits in behavioral inhibition as a core characteristic of ADHD. According to this model, impaired self-regulation leads to challenges in sustaining attention and managing impulses. Barkley posits that behavioral inhibition plays a foundational role in the development of executive functions, including working memory, self-regulation of affect and motivation, and reconstitution (the ability to mentally manipulate ideas and actions). Children with ADHD struggle with these processes, leading to difficulties in focusing on tasks, following instructions, and controlling impulsive behaviors.

Additionally, Vygotsky's Sociocultural Theory (Vygotsky, 1978) provides a complementary perspective by highlighting the role of social interactions and environmental context in cognitive development. Vygotsky emphasized that learning and cognitive functions develop through mediated social interactions, where caregivers, teachers, and peers influence a child's ability to regulate attention and behavior. The concept of the Zone of Proximal Development (ZPD) suggests that children with ADHD can benefit from structured guidance and scaffolding techniques that gradually improve their ability to sustain attention and manage their cognitive load. By integrating these two theoretical perspectives, this study acknowledges that attention deficiency is not

solely a cognitive issue but also a psychosocial one. While Barkley's model explains the internal cognitive struggles related to ADHD, Vygotsky's framework highlights the external, social factors that can support or hinder attention development. These theories collectively inform the study's approach, emphasizing both cognitive and psychosocial interventions in addressing attention deficiency among preschool and elementary learners.

Gaps in Literature and Rationale for the Study. Despite extensive research on ADHD and attention deficiency, limited studies focus specifically on how cognitive and psychosocial factors jointly influence attention among young learners in the Philippine educational context. Existing studies often examine these factors in isolation, neglecting their interconnected effects (Casas et al., 2023). Furthermore, most interventions remain centered on pharmacological solutions, with less emphasis on non-medical, educational, and psychosocial interventions. This study aims to bridge these gaps by investigating how cognitive and psychosocial abilities influence attention deficiency, ultimately guiding the development of targeted educational strategies.

Conceptual Framework. This study explores the influence of cognitive abilities and psychosocial abilities on attention deficiency among preschool and elementary learners. Cognitive abilities encompass memory retention, executive functioning, and information processing speed. These skills are essential for maintaining focus, recalling learned information, and managing cognitive tasks effectively. When cognitive functions are weak, learners may struggle to retain information, switch between tasks, and control impulses, leading to attention difficulties.

Psychosocial abilities, on the other hand, include emotional regulation, social interactions, and engagement in structured physical activities. Emotional regulation helps children manage stress and cope with distractions, while positive social interactions, such as peer support and teacher guidance, provide an encouraging learning environment.

Participation in structured physical activities has also been linked to improved attentional control and reduced hyperactivity.

By identifying these relationships, this study provides a structured model to guide targeted interventions aimed at reducing attention deficiency. Enhancing both cognitive and psychosocial abilities can help young learners develop better attentional control, ultimately improving their academic performance and overall learning experience.

METHODOLOGY

Research Design. A quantitative research design was used in this study. According to Creswell (2017), this design collects and analyzes numerical data; it systematically investigates phenomena by gathering quantifiable data and performing statistical, mathematical, and computational techniques. The results are depicted in numerical form.

Specifically, this study employed a descriptive-correlational research design to assess and describe the levels of cognitive and psychosocial abilities, as well as attention deficiency, among preschool and elementary learners diagnosed with ADHD. The correlational approach was used to examine the relationships between cognitive and psychosocial abilities and attention deficiency without manipulating any variables. This research design was chosen because it allows for the identification of naturally occurring relationships without experimental intervention, providing insights into potential predictors of attention challenges in children.

Respondents. This study utilized 60 purposively selected preschool (aged 4-6) and elementary (aged 7-12) learners who were enrolled in public and private schools offering Special Education in Region XI and Region XII. All participating learners have a diagnosis and assessment confirming Attention Deficit Hyperactive Disorder (ADHD). Since these learners were minors, the survey questionnaires were administered to their parents/guardians or teachers.

Research Instrument. In determining the level of cognitive abilities of the learners, the researchers adapted and modified the 1955 Wechsler Adult Intelligence Scale (WAIS), a widely used cognitive research instrument for assessing intelligence and cognitive ability in adults. The respondents used the following rating: 5 as strongly agree, 4 as agree, 3 as neutral, 2 as disagree, and 1 as strongly disagree.

In determining the level of psychosocial abilities and attention deficiencies of the learners, the researchers also adapted and modified Conners Comprehensive Behavior Rating Scales (CBRS), developed by Keith Conners, which is a widely used research instrument questionnaire for assessing attention deficiency and related behavioral issues in individuals. The CBRS is frequently used in research and clinical settings to gather information on a person's behavior and to help in making diagnostic and treatment decisions. It is a 10-item instrument with the following indicators: coping mechanism and leisure activity. The respondents used the following rating: 5 as strongly agree, 4 as agree, 3 as neutral, 2 as disagree, and 1 as strongly disagree. Furthermore, these instruments were all validated by an expert and have at least good internal consistency with Cronbach's Alpha $\alpha \geq 0.716$.

Data Gathering Procedure. The researchers sent a request letter to the selected schools in Region XI and Region XII to conduct the study asking permission from the school principals of the involved schools. After securing the permission of the school principals, the researchers secured the consent of the parents/guardians or teachers of the learners before the administration of the survey.

During the administration of the survey, the researchers properly explained the method of answering the questionnaires offered to the designated respondents, with the agreement and full support of the school administrator. The researchers translated each question from the indicators throughout the administration of the online survey to ensure that the respondents

understood each question and provided valid replies. The selected parents/guardians in the school complied honestly and were provided with all the necessary data needed in the survey questionnaire. Once done, the researchers retrieved all the answered questionnaires via Google forms. After which, the data were then compiled and analyzed following the successful administration and retrieval of the survey questionnaires.

Data Analysis. To answer items 1 to 3, the researchers used the mean to analyze the level of learners' cognitive and psychosocial abilities and attention deficiency. The Likert scale below (Table 1) was used to analyze the results.

Table 1
Four-point Likert Scale

Range of Means	Description	Interpretation
4.20 – 5.00	Very High	This means that the students are with excellent working cognitive/psychosocial process
3.40 – 4.19	High	This means that the students with high working/psychosocial process
2.60 – 3.39	Moderate	This means that the students are with moderately working cognitive/psychosocial process
1.80 – 2.59	Low	This means that the students are with poor working cognitive/psychosocial process
1.00 – 1.79	Very Low	This means that the students are with very poor working cognitive/psychosocial process

To answer problem number 4, a multiple regression analysis was used to determine whether the independent variables, such as cognitive ability and psychosocial ability, are significant predictors of the dependent variable, attention deficiency. Multiple regression analysis is essential in this context because it allows us to examine the relationship between multiple independent variables (such as cognitive ability and psychosocial ability) and a single dependent variable (attention deficiency). This method allows the calculation of an equation that can predict attention deficiency scores from specific values of cognitive and psychosocial scores.

RESULTS

This study primarily investigated the levels of cognitive and psychosocial abilities of the learners and their level of attention deficiency. Also, this study investigated the influence of the levels of cognitive and psychosocial abilities of the learners on the level of their attention deficiency.

Level of Cognitive Abilities of the Learners. The subsequent tables provide a detailed discussion of every indicator and its corresponding items.

Table 2
Level of Cognitive Ability in Terms of Learning

Level of Cognitive Ability in Terms of Learning	Mean	Description
I use visual aids to help me understand concepts.	3.93	High
I prefer hearing information rather than seeing it.	3.58	High
I learn through images, lectures, diagrams, and charts.	4.12	High
Learning effectively through hands-on activities, experiments, and movement.	4.25	Very High
Learners actively engaged in processing information	3.68	High
Overall	3.91	High

Table 2 above displays the findings on learners' cognitive abilities in relation to various learning modalities. Each item in the table corresponds to a distinct aspect of cognitive engagement, encompassing preferences for visual aids, auditory input, multimodal stimuli, hands-on activities, and active information processing. These elements are central to understanding how learners' approach and assimilate knowledge.

The highest mean score (4.25) is associated with hands-on, kinesthetic learning. This suggests that learners in this cohort exhibit a particularly strong preference for experiential, active engagement, where they can manipulate materials, conduct experiments, and learn through physical involvement. Such activities likely allow them to make concrete connections to abstract concepts, fostering deeper comprehension and retention of information. The "Very High" descriptor underscores the importance of incorporating hands-on activities in the curriculum to maximize cognitive engagement. This finding aligns with constructivist theories, which emphasize learning as an active, social process where knowledge is constructed through experience. The second-highest score (4.12) indicates that learners also strongly benefit from a multimodal approach that includes both visual and auditory components. By engaging with lectures alongside images, diagrams, and charts, students can connect verbal explanations with visual representations, enhancing comprehension. This preference for integrated visual-verbal stimuli suggests that instructional strategies should incorporate both types of inputs to cater to diverse cognitive

processing styles. Visual aids alone, such as standalone diagrams, charts, and images, also play a significant role in learning, as indicated by a mean score of 3.93. This finding suggests that while learners benefit from multimodal approaches, they also find value in purely visual resources when attempting to understand concepts. Visual aids help learners process complex information through concrete visual representations, providing clarity and aiding in memory retention. This further supports the importance of visual materials in instructional design, which are beneficial in simplifying complex ideas.

With a mean of 3.68, learners demonstrate a high level of cognitive engagement when actively processing information. Active engagement involves tasks such as analyzing, evaluating, and synthesizing information rather than passively receiving it. This high level of cognitive involvement reflects a preference for deeper learning approaches, where students move beyond surface understanding. Encouraging active processing strategies such as critical thinking exercises, problem-solving, and discussions may thus enhance cognitive engagement and foster meaningful learning outcomes.

The lowest mean score (3.58) is associated with auditory learning, where learners express a preference for hearing information. Although this is rated "High," it is comparatively lower than the other modalities, suggesting that learners in this sample may benefit more from visual and kinesthetic learning than purely auditory approaches. This implies that while auditory instruction is valuable, it should ideally be supplemented with other modalities to maximize engagement and understanding. This finding highlights the importance of a multimodal approach, where auditory input is integrated with other sensory experiences.

The overall mean score of 3.91 reflects a high level of cognitive engagement across various learning modalities, suggesting that the learners are generally responsive to diverse instructional methods. This result implies that a balanced instructional approach incorporating

visual, auditory, and kinesthetic strategies would be most effective for this group. Such an approach would cater to different cognitive strengths and preferences, providing a holistic learning environment that supports various facets of cognitive engagement.

Table 3
Level of Cognitive Ability in Terms of Memory

Indicators	Mean	Description
I have the ability to remember new information.	3.50	High
I have the ability to recall information from the past.	3.48	High
I find difficulty remembering names, dates or events.	3.13	Moderate
Difficulty remembering instructions or directions.	3.17	Moderate
Strategies (e.g., mnemonics, visualization) used to enhance memory	3.73	High
Overall	3.40	High

Table 3 presents an analysis of participants' self-reported cognitive abilities in memory across several indicators, ranked from highest to lowest mean score. The highest-rated indicator is "Strategies (e.g., mnemonics, visualization) used to enhance memory," with a mean score of 3.73, categorized as high. This suggests that participants frequently employ strategies like mnemonics and visualization, indicating an active approach to enhancing memory retention. The prevalence of such strategies implies a recognition of their effectiveness and a willingness among participants to adopt tools that aid cognitive retention.

The indicators "I have the ability to remember new information" and "I have the ability to recall information from the past" both scores similarly at 3.50 and 3.48, respectively, both classified as high. These scores reveal a relatively strong confidence in both short-term acquisition and long-term recall capabilities. Such self-assurance in recalling past information and learning new material might reflect well-practiced cognitive techniques or inherent memory resilience within the participant sample.

Indicators such as "I find difficulty remembering names, dates or events" (3.13) and "Difficulty remembering instructions or directions" (3.17) have moderate mean scores, suggesting that while memory functions well for more general knowledge and strategic recall, there is some perceived difficulty with details like names,

dates, and specific instructions. This pattern may indicate that while broader memory skills are well-developed, finer details or specialized tasks might require more support or additional memory aids.

The overall mean for cognitive ability in terms of memory is 3.40, categorized as high. This high overall rating implies that participants generally perceive their memory functions positively, with specific strengths in employing memory strategies and recalling general information. The use of various cognitive strategies likely strengthens these skills further, despite moderate difficulties with certain types of memory recall. These findings underscore the significance of strategy use and highlight potential areas where additional training or support may benefit participants, particularly in areas requiring detailed memory retention.

Level of Psychosocial Abilities of the Learners.

Table 4 provides an assessment of participants' psychosocial abilities regarding coping mechanisms. This table reflects how participants manage stress or challenging situations through various strategies.

Table 4
Level of Psychosocial Ability in Terms of Coping Mechanism

Indicators	Mean	Description
I find positive meaning or purpose in difficult experiences.	3.35	High
I use humor to cope with difficult situations.	3.52	High
I express my emotions through talking and writing.	3.47	High
Seeking support from friends and family.	3.95	High
I enjoy physical activity.	3.87	High
Overall	3.63	High

The highest-rated indicator, "Seeking support from friends and family," has a mean of 3.95, classified as high. This score reveals that participants place significant value on social support as a primary coping mechanism, indicating strong social connections and an inclination toward collaborative problem-solving in times of difficulty. The importance given to family and friend support suggests that interpersonal relationships are a vital part of

the participants' coping repertoire, offering both emotional assistance and practical advice.

"I enjoy physical activity" is the next highest indicator, with a mean score of 3.87, also rated as high. This suggests that participants find value in physical activity as a method for managing stress, likely benefiting from the mental and physical health advantages associated with exercise. Following this is "I use humor to cope with difficult situations" with a mean of 3.52, which further underscores participants' tendency to employ humor as a strategy for reframing challenges, thus fostering a sense of resilience.

Participants also report high levels of "expressing emotions through talking and writing," with a mean score of 3.47. This indicates an openness to processing emotions through verbal or written communication, facilitating emotional release and clarity during difficult times. Likewise, the indicator "I find positive meaning or purpose in difficult experiences" scored 3.35, also high, which suggests that participants are adept at finding constructive perspectives even amid adversity, contributing to a sense of personal growth and resilience.

With an overall mean score of 3.63, the level of psychosocial ability in coping mechanisms is classified as high, showing that participants are generally equipped with a robust set of tools to manage stress effectively. This comprehensive coping approach encompasses social support, physical activity, emotional expression, humor, and the search for meaning, each contributing to their resilience.

These findings highlight that participants not only rely on social and physical outlets for coping but also actively engage in cognitive reframing and emotional processing to manage challenges. Such coping diversity suggests a holistic and adaptive approach to psychosocial well-being, which could further strengthen individual and collective resilience in various contexts.

Table 5
Level of Psychosocial Ability in Terms of Leisure Activity

Indicators	Mean	Description
I engage in activities to distract myself from negative emotions	3.63	High
I do creative activities like drawing, dancing, and playing musical instruments.	3.58	High
I do exercise and engage in sports.	3.50	High
I explore the natural world and learn about plants and animals.	3.73	High
I use social media to relax.	3.57	High
Overall	3.60	High

Table 5 presents participants' psychosocial ability in terms of leisure activities. The table indicates high levels of engagement across a variety of leisure activities, reflecting how these activities contribute to relaxation, distraction from negative emotions, and overall well-being. The indicator with the highest mean, "I explore the natural world and learn about plants and animals," has a score of 3.73, classified as high. This suggests a strong interest in nature-related activities among participants, reflecting a preference for outdoor exploration as a leisure activity. Engaging with the natural environment likely provides a sense of tranquility, mental clarity, and escape from daily stresses, which can positively impact psychosocial health.

The next highest indicator is "I engage in activities to distract myself from negative emotions," with a mean score of 3.63, also rated high. This implies that participants frequently use leisure activities as a way to manage or alleviate negative emotions, which can be effective for mood regulation and stress relief. Following closely are "I do creative activities like drawing, dancing, and playing musical instruments" (3.58) and "I use social media to relax" (3.57), both also rated high. These scores reveal that creativity and social media engagement serve as accessible outlets for relaxation and self-expression, aiding participants in managing emotional stress while fostering enjoyment and social connection.

The indicator "I do exercise and engage in sports" has a mean of 3.50, categorized as high. This result highlights participants' engagement with physical activities as a means of leisure,

which contributes to both physical health and emotional well-being by providing a constructive outlet for energy and tension.

With an overall mean score of 3.60, the participants' psychosocial ability in terms of leisure activity is classified as high. This high level of engagement across various activities suggests that participants actively seek different forms of leisure to cope with stress, find enjoyment, and maintain a balanced lifestyle. The diversity in leisure preferences—ranging from exploring nature to social media, sports, and creative activities—indicates a well-rounded approach to relaxation and self-care. The findings from Table 4 suggest that participants value and actively participate in a variety of leisure activities as part of their coping strategies. By incorporating activities that promote distraction, creativity, physical exertion, and connection with nature, participants demonstrate a holistic and adaptive approach to maintaining their psychosocial well-being through leisure pursuits.

Level of Attention Deficiency of the Learners.

Table 6 shows the participants' reported attention deficiency, specifically focusing on difficulty maintaining focus across various situations. Each indicator reflects different aspects of attentional challenges.

Table 6
Level of Attention Deficiency in Terms of Difficulty Focusing

Indicators	Mean	Description
I often find myself easily distracted by noises, people, or other stimuli.	4.05	Very High
My mind frequently wanders during tasks, conversations, or lectures.	3.82	High
I struggle to stay focused on a single task for an extended period of time.	3.63	High
I often find myself losing my train of thought in the middle of a conversation or activity.	3.42	High
I frequently find it difficult to complete tasks or projects due to a lack of focus.	3.62	High
Overall	3.71	High

The highest mean score is "I often find myself easily distracted by noises, people, or other stimuli," with a very high rating of 4.05. This indicates a pronounced susceptibility to external distractions, highlighting

environmental stimuli as a major source of attention disruption for participants. Such high sensitivity to external disturbances can contribute to frequent interruptions in concentration, suggesting a need for more controlled or quieter environments to optimize focus.

The indicator "My mind frequently wanders during tasks, conversations, or lectures" follows with a mean of 3.82, rated as high. This finding points to a common tendency for participants' thoughts to drift, particularly in structured or attention-intensive situations. Similarly, the indicator "I struggle to stay focused on a single task for an extended period of time" has a high mean of 3.63, indicating difficulties with sustained attention, which is crucial for tasks requiring prolonged focus and consistency. These two indicators imply that participants may face challenges with internal focus regulation, which can affect their performance in academic or professional contexts.

The indicators "I frequently find it difficult to complete tasks or projects due to a lack of focus" (3.62) and "I often find myself losing my train of thought in the middle of a conversation or activity" (3.42) also scored high. This indicates that participants not only face difficulty staying on task but also experience interruptions in their thought process, which can hinder the completion of tasks and the flow of communication.

With an overall mean score of 3.71, participants' level of attention deficiency regarding difficulty focusing is categorized as high. The prevalence of high scores across various indicators suggests that participants commonly experience attention-related challenges that could impact their productivity and engagement. The data highlights the influence of both external stimuli and internal distractions on participants' ability to maintain consistent focus.

Table 6 reveals that participants frequently encounter barriers to sustained attention, often due to sensitivity to external stimuli and

internal tendencies like mind-wandering and losing one's train of thought. These findings underscore the potential value of strategies aimed at enhancing focus, such as creating distraction-free environments, practicing mindfulness, or implementing task management techniques to better support sustained concentration.

Table 7
Level of Attention Deficiency in Terms of Academic Struggles

Indicators	Mean	Description
I often find it difficult to stay focused during class or while doing homework.	3.60	High
I frequently struggle to complete assignments on time due to a lack of organization.	3.62	High
I often lose or misplace important school materials, such as textbooks or notebooks.	3.48	High
I find it challenging to remember information that I have learned.	3.43	Moderate
I often feel overwhelmed by the amount of work I have to do.	3.52	High
Overall	3.53	High

Table 7 reveals the participants' attention deficiency in terms of academic struggles. As shown, the indicator with the highest mean is "I frequently struggle to complete assignments on time due to a lack of organization," with a score of 3.62, rated as high. This suggests that organizational challenges significantly impact participants' ability to meet academic deadlines. The difficulty with organization indicates a potential area where intervention could improve academic outcomes, as organizational skills are essential for managing workloads effectively.

The indicator "I often find it difficult to stay focused during class or while doing homework" follows closely, with a mean score of 3.60, also rated as high. This finding suggests that participants often struggle to maintain focus during academic activities, likely affecting their engagement and comprehension in learning environments. The statement "I often feel overwhelmed by the amount of work I have to do" has a high mean of 3.52, further underscoring the academic stress participants face. This sense of overwhelm may exacerbate other struggles, such as difficulty with organization and focus, creating a cycle of academic strain.

Participants also report challenges in maintaining track of academic materials, as indicated by "I often lose or misplace important school materials, such as textbooks or notebooks," which scored 3.48, rated as high. This suggests that a lack of organization may extend beyond assignments to other academic essentials. The indicator "I find it challenging to remember information that I have learned" has a high mean score of 3.43, indicating that while memory retention may not be as prominent a concern as focus or organization, it still presents a high level of difficulty for some participants.

The overall mean score of 3.53 indicates a high level of attention deficiency in terms of academic struggles, suggesting that participants face consistent challenges with focus, organization, and workload management. These struggles highlight potential areas where support strategies, such as time management training, organization tools, and study techniques, could positively impact academic performance.

Table 7 illustrates that participants encounter notable attention-related difficulties in academic settings, particularly regarding organization and maintaining focus on tasks. Addressing these areas could improve participants' academic experiences by fostering better focus and organizational skills, ultimately reducing the sense of overwhelm associated with academic demands.

Predictive Influence of Cognitive and Psychosocial Abilities on Attention Deficiency: Regression Analysis Results. In investigating the relationship between psychosocial ability, cognitive ability, and attention deficiency, the researchers conducted a regression analysis to understand the predictive power of these variables. The model summary presented in Table 8 reveals several key statistics that merit further exploration.

The R-value of 0.329 indicates a moderate positive correlation between the combined predictors (New Psychosocial Ability and Cognitive Ability) and the dependent variable,

attention deficiency. This suggests that as scores in psychosocial and cognitive abilities increase, there is a tendency for attention deficiency scores to decrease, though the relationship is not exceptionally strong.

Table 8
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.329a	.108	.077	.66642

a. Predictors: (Constant), Psychosocial Ability, Cognitive Ability

The R Square value of 0.108 implies that approximately 10.8% of the variance in attention deficiency can be explained by the model. While this indicates that the predictors account for some of the variability, it also suggests that a significant portion of the variance (around 89.2%) remains unexplained. This highlights the complexity of attention deficiency and suggests that other factors beyond psychosocial and cognitive abilities may be influencing this outcome.

Given the limited explanatory power indicated by the R^2 value, further research is warranted to identify other potential predictors that could enhance the model. Additional variables, such as environmental, demographic, or situational factors, may need to be integrated to provide a more comprehensive understanding of the factors influencing the dependent variable.

For practitioners and stakeholders, this model serves as a starting point for understanding the influence of psychosocial and cognitive factors on the outcome of interest. However, caution should be exercised in making decisions based solely on these findings, as the model's limited explanatory capacity suggests that other factors may significantly impact outcomes.

Table 8
ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	3.075	2	1.538	3.462	.038b
Residual	25.315	57	.444		
Total	28.390	59			

a. Dependent Variable: Attention Deficiency
b. Predictors: (Constant), Psychosocial Ability, Cognitive Ability

In our analysis of the relationship between new psychosocial ability, cognitive ability, and attention deficiency, we conducted an ANOVA to evaluate the overall significance of our regression model. The results, as shown in Table 8, provide critical insights into the effectiveness of our predictors in explaining attention deficiency.

The ANOVA table shows that the independent variables statistically and significantly predict the dependent variable, $F(2, 57) = 3.462, p = .038$, which means that the regression model is a good fit for the data.

The resulting F -value of 3.462 is a critical statistic that helps us understand the ratio of the variance explained by the model to the variance that remains unexplained. This F -value indicates that the model's explanatory power is significantly greater than that of the residual variance. The accompanying p -value of 0.038 is particularly noteworthy. This value is below the standard alpha level of 0.05, suggesting that we can reject the null hypothesis, which posits that the predictors do not significantly contribute to explaining attention deficiency. Thus, the statistical significance of the model implies that at least one of the predictors (either psychosocial ability or cognitive ability) has a meaningful relationship with attention deficiency.

Table 9
Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	3.634	.715		5.082	.000	2.202	5.066
1 Cognitive Ability	.303	.173	.224	1.749	.086	-.044	.651
Psychosocial Ability	-.321	.139	-.296	-2.305	.025	-.600	-.042

a. Dependent Variable: Attention Deficiency

The results of the regression analysis, as presented in Table 9, provide valuable insights into the contributions of cognitive ability and psychosocial ability to the variance in attention deficiency.

The constant term is estimated at 3.634, indicating the baseline level of attention deficiency when both cognitive and

psychosocial abilities are at zero. This constant serves as a reference point for understanding the effects of the predictors in the model.

Examining the predictor Cognitive Ability, the unstandardized coefficient of 0.303 suggests that for each one-unit increase in cognitive ability, attention deficiency is expected to increase by 0.303 units, holding psychosocial ability constant. However, the p -value associated with this coefficient is 0.086, which is above the conventional alpha level of 0.05, indicating that this relationship is not statistically significant.

In contrast, the coefficient for Psychosocial Ability is -0.321, indicating a significant negative relationship with attention deficiency. Specifically, for every one-unit increase in psychosocial ability, attention deficiency is expected to decrease by 0.321 units, controlling for cognitive ability. The associated p -value of 0.025 confirms statistical significance, as it falls below the alpha threshold of 0.05.

The significant negative association between psychosocial ability and attention deficiency underscores the importance of psychosocial factors in mitigating attention-related challenges. This suggests that interventions aimed at enhancing psychosocial skills, such as emotional regulation, social interaction, and resilience, could effectively contribute to reducing attention deficiencies. Such findings align with existing literature that emphasizes the role of psychosocial competencies in fostering positive outcomes for individuals with attention-related difficulties.

Conversely, the non-significant positive relationship between cognitive ability and attention deficiency introduces complexity to our understanding of these constructs. The expectation that higher cognitive ability would correlate with lower attention deficiency is not fully supported by the data. This raises questions about the nature of cognitive processes and their potential interactions with attention challenges. Future research should explore the specific cognitive functions that may be implicated in attention deficiency and

whether they vary by individual or contextual factors.

DISCUSSION

The findings of this study highlighted the significant role of both cognitive and psychosocial abilities in influencing attention deficiency among preschool and elementary learners. While the results provide valuable insights, a deeper analysis is necessary to interpret their implications, align them with existing literature, and explore their relevance to intervention strategies.

Cognitive Abilities and Their Influence on Attention Deficiency. The results indicate that learners exhibit high levels of cognitive engagement across various learning modalities, particularly favoring hands-on, kinesthetic learning. This aligns with the constructivist learning theory (Piaget, 1952), which emphasizes that active, experiential learning enhances cognitive engagement and retention. The strong preference for multimodal instructional strategies—combining visual and auditory components—suggests that incorporating these methods into teaching can enhance focus and information processing. These findings support previous research suggesting that multimodal learning improves memory retention and executive functioning in students with ADHD (Alloway & Alloway, 2014). However, despite high cognitive engagement, the study also reveals difficulties in specific memory-related tasks, such as recalling names, dates, and instructions. This finding is consistent with studies emphasizing the role of working memory deficits in attention deficiency (Gathercole et al., 2006). The moderate ratings in recalling detailed information suggest that while students may actively engage in learning, they still require structured memory-enhancing techniques such as mnemonics, visualization strategies, and spaced repetition to reinforce retention (Roediger & McDermott, 1995).

Additionally, neurobiological studies highlight those impairments in executive functioning—such as cognitive flexibility, inhibition control, and processing speed—contribute to attention

deficiencies (Posner et al., 2019). These findings emphasize the importance of cognitive training interventions, including structured learning environments, executive function coaching, and scaffolded instruction, to enhance cognitive processing and reduce attention-related challenges.

Psychosocial Abilities and Their Role in Attention Regulation. Psychosocial abilities emerged as a significant predictor of attention deficiency, with stronger social and emotional regulation skills correlating with lower attention difficulties. This finding reinforces the role of Vygotsky's Sociocultural Theory (1978), which posits that social interactions and guided learning experiences shape cognitive development. Learners who actively seek social support and engage in physical activities demonstrate enhanced focus and reduced attention deficiencies, supporting studies linking psychosocial well-being to academic success (Reigal et al., 2020b).

The study's findings also highlight the importance of coping mechanisms, such as humor, emotional expression, and social engagement, in mitigating attention-related struggles. Research suggests that children who develop emotional regulation skills are better equipped to manage distractions and sustain attention (Faulkner, 2020). Moreover, participation in structured physical activities not only improves mental well-being but also enhances neurocognitive function, as supported by studies showing that exercise reduces impulsivity and enhances executive control (Childs & de Wit, 2014).

Regression Analysis: Predictive Role of Cognitive and Psychosocial Abilities. The regression analysis reveals that psychosocial abilities are a statistically significant predictor of attention deficiency, while cognitive abilities show a non-significant relationship. This suggests that while cognitive skills contribute to learning, psychosocial factors play a more crucial role in regulating attention in real-world settings. These results align with existing research emphasizing the role of emotional resilience and adaptive coping strategies in

managing attention-related challenges (Casas et al., 2023).

The relatively low explanatory power of the model ($R^2 = 0.108$) suggests that other factors, such as environmental influences, classroom structure, and parental involvement, may also play crucial roles in shaping attention deficiency. This aligns with Bronfenbrenner's Ecological Systems Theory (1979), which underscores the impact of external environmental factors on child development. Future research should consider integrating additional variables, such as socioeconomic status, teacher interventions, and home learning environments, to better understand the multifaceted nature of attention deficiencies.

Implications for Educational Interventions. Given these findings, educators and policymakers should prioritize holistic interventions that address both cognitive and psychosocial domains. Strategies that integrate multimodal learning, structured memory aids, and social-emotional learning (SEL) programs can enhance attention regulation in students. Schools should also foster inclusive environments that provide students with emotional and social support, emphasizing the importance of peer interactions and structured physical activities in mitigating attention challenges.

Additionally, the non-significant relationship between cognitive abilities and attention deficiency suggests that intervention strategies should not solely focus on cognitive training but should also incorporate behavioral and environmental modifications to optimize learning outcomes. Techniques such as mindfulness practices, classroom behavior reinforcement, and parental coaching may offer effective support for learners struggling with attention-related issues.

Limitations and Future Research Directions. While this study provides valuable insights, it has several limitations. First, the sample size ($n=60$) is relatively small, limiting the generalizability of the findings. Future studies

should involve larger, more diverse samples to validate the results. Additionally, the study relied on self-reported measures, which may introduce subjective biases. Employing objective cognitive assessments and observational methods could provide more accurate insights into the learners' attention regulation abilities.

Moreover, the study did not consider external variables such as parental involvement, classroom environment, and socioeconomic factors, which could influence attention deficiency. Future research should adopt a multifactorial approach, integrating both individual and environmental predictors to develop a more comprehensive model of attention regulation.

Conclusion. This study investigated the levels of cognitive and psychosocial abilities among learners and their impact on attention deficiency. The findings revealed that learners exhibit high levels of cognitive engagement across various learning modalities, with a particular preference for hands-on, kinesthetic learning. This suggests that experiential learning activities significantly enhance cognitive engagement and comprehension. Additionally, the use of multimodal instructional strategies, incorporating both visual and auditory components, was found to be beneficial. In terms of memory, participants reported high confidence in their ability to remember new information and recall past information, with frequent use of strategies like mnemonics and visualization. However, some difficulties were noted in remembering specific details such as names and dates.

The study also highlighted the importance of psychosocial abilities in coping with stress and managing attention deficiency. Participants demonstrated a robust set of coping mechanisms, including seeking social support, engaging in physical activities, and using humor. These strategies contribute to their overall psychosocial well-being and resilience.

Attention deficiency was found to be influenced by both external distractions and internal

tendencies such as mind-wandering. The regression analysis indicated a moderate positive correlation between cognitive and psychosocial abilities and attention deficiency, with psychosocial ability showing a significant negative relationship with attention deficiency. Further, based on the conclusion, this study accepted the assertion of the theory of Cognitive Behavioral Theory by RA Barkely. Correspondingly. A theoretical model is that links inhibition that appear to depend on it for their effective execution: working memory, self-regulation, and reconstitution (behavioral analysis and synthesis).

Recommendations. Based on the findings of this research, the researchers recommend that educational institutions should incorporate more hands-on, kinesthetic learning activities into their curricula. This approach aligns with the learners' strong preference for experiential learning and can enhance cognitive engagement and retention.

Teachers should integrate visual and auditory components into their teaching methods. Using lectures alongside images, diagrams, and charts can cater to diverse cognitive processing styles and improve comprehension.

The use of memory strategies such as mnemonics and visualization among learners should be encouraged. Providing training on these techniques can help students improve their memory retention and recall abilities.

Schools should foster environments that support social connections and emotional well-being. Programs that encourage seeking support from friends and family, engaging in physical activities, and using humor can enhance students' coping mechanisms.

To address attention deficiency, it is crucial to minimize external distractions in learning environments. Implementing quiet zones and structured routines can help students maintain focus.

Mindfulness practices and focus training programs should be introduced to help students

manage internal distractions such as mind-wandering. These practices can improve sustained attention and overall academic performance.

Lastly, given the moderate explanatory power of the regression model, additional research should explore other potential predictors of attention deficiency. Factors such as environmental influences, demographic variables, and situational contexts may provide a more comprehensive understanding of attention-related challenges.

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