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ADHD and Academic Achievement: A Survey Study on the Impact of ADHD on Student Performance

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ABSTRACT:

Attention-Deficit/Hyperactivity Disorder (ADHD) is the primary neurodevelopmental disorder that impacts children and adolescents globally. The present study investigates through quantitative survey methods how ADHD affects academically the students. The population surveyed included 200 students, of which 100 had ADHD and the other 100 did not. The academic performance evaluation resulted in much higher grades in the case of not ADHD diagnosed students, better attendance, more completed assignments, and taking part in class discussions. Inattention and impulsivity, the main ADHD symptoms, have been pointed out to severely impede the learning process and hence to be detrimental to the quality of education. Hence, the paper notifies that the school system should adopt a multi-faceted treatment comprised of behavior therapy, individualized education plans, and early detection of ADHD for better academic performance outcomes.

Keywords: *impulsivity, inattention, education, student performance, ADHD, and academic success.*

1. INTRODUCTION:

ADHD is mainly characterized by the persistent occurrence of three symptoms—impulsivity, hyperactivity, and inattention—to such an extent that the disorder interferes with the patient's daily activities and/or development. Moreover, it is considered a neurodevelopmental disorder and mostly diagnosed (American Psychiatric Association, 2013). The disorder is so common among children that it is one of the top psychiatric disorders' lists, which is why it is affecting 5 to 10% of all school-aged kids in the world (Polanczyk et al., 2014). On the other hand, the battle with ADHD is not solely a problem for kids; those who have it may gradually experience the stages of development with ADHD; thus, the disorder will be a hindrance in various areas of their life for a longer time (Biederman et al., 2012).

The presence of ADHD in the classroom brings about some very distinctive challenges in the educational system. The symptoms of the disorder not only do not comply with the requirements of a highly organized and disciplined study environment but also make it impossible for the students to endure it. According to DuPaul and Stoner (2014), in their research, ADHD children are very frequently unable to concentrate on the lecture, unable to follow even the simplest multi-step instructions, always attracted by the distractions, and never able to submit their assignments on time. The difficulties in controlling attention are compounded by the students' cognitive problems in the area of executive function, which is a set of mental activities including working memory, self-control, planning, and flexibility of thought (Barkley, 2015). Such factors are vital for educational success and, consequently, the affected students are often portrayed as disorganized, forgetful, and incapable of handling long-term projects.

The cognitive and behavioral skills previously mentioned are the foundation for academic support and success, which primarily manifests itself in the form of performance indicators such as grade point averages, standardized test scores, and teacher evaluations. The same holds true for students with an ADHD diagnosis, as the most talented ones among them have to confront the mentioned traits in the learning environment. Thus, it is quite reasonable for ADHD children to be less successful in school than their peers without any neurodevelopmental disorders at all. They are more prone to dropout, have lower reading and math test scores on state tests, and sometimes they are even the ones who get retained in the same grade, as research has shown (Frazier et al., 2007; Loe & Feldman, 2007).

As more and more children with ADHD condition are being recognized and diagnosed in the school settings, the knowledge on such children's performance will greatly help the proper interventions'implementation. Although a strong link exists between ADHD and academic failure, it is essential to specify which academic skills and areas the disorder's core symptoms have the most impact on. Is impulsiveness resulting in careless mistakes a stronger predictor of low grades than difficulty accompanying the test throughout? What is the influence of poor organization on homework vs. final exam performance? Hence, this research aims to clarify the complex relationships between academic success and ADHD symptoms.

The methodology based on surveys identifies the very areas—such as reading comprehension, writing, or problem-solving in mathematics—where ADHD symptoms are the strongest predictors of poor performance, and thus it provides targeted insights for teachers and therapists to support the vulnerable student population.

2. Review of Literature:

A large number of studies have pointed out that students diagnosed with Attention-Deficit/Hyperactivity Disorder (ADHD) merely suffer academic problems to a lesser extent when compared to their neurotypical peers. The symptoms of ADHD, which are notorious for their poor attention span, hyperactivity, and impulsivity, are in direct contradiction with the teacher's expectations that are usually present in a conventional classroom. This leads to lower academic performance as a consequence. Along with this, the mentioned symptoms are often considered as a result of executive function impairment. Barkley (2014) explains that individuals with ADHD have very low capacities in most of the executive functions such as thinking ahead,

keeping information in mind for a short period, controlling emotions, and inhibiting one's own behavior. These functions are essential for learning and completing assignments, so students with ADHD can be seen as incapable of staying focused on tasks, following multi-step instructions, organizing materials and time, and monitoring the quality of their work. Such behaviors being frequently interpreted as lack of motivation or even misbehavior.

There are numerous cognitive challenges and all of them have a serious and vast functional impact. The researches, both longitudinal and meta-analytic, come to a consensus that children with ADHD suffer from a greater variety of negative academic outcomes. The more this group gets lower GPAs, and does worse on the standardized tests in the basic subjects such as reading and math, the more their retention rates get higher, according to DuPaul & Stoner (2019). Moreover, the educational journey is often interrupted; post-secondary education is less likely for children with ADHD and their school dropout rates are much higher compared to the average student (Frazier et al., 2007). Due to the impulsive nature and inability to comply with expected behaviors in class, these students are more frequently referred and even suspended for disciplinary actions than their academic performance alone would suggest, thus, losing critical chances to learn (DuPaul & Stoner, 2019).

Academics and symptoms of ADHD do not have an evident relationship, that is to say, the impact of different presentations of ADHD symptoms on school performance is subject to research that is increasing in number and depth. Research indicates that the most powerful indicator of students' below-par academic performance is very often the inattentive symptom dimension. The lowered grades and test scores caused directly by these students are due to their inability to persist in tasks, execute the work carefully, and consistently perform (Loe & Feldman, 2007). On the contrary, the hyperactive-impulsive dimension is more associated with behavioral problems in the classroom that result in peer rejection, teacher conflict, and other learning negatively affected by the student's direct and indirect academic performance interference. Such a situation is likely if students with this combination of symptoms are seen to be at risk of both direct and indirect academic failure.

A plethora of different intervention techniques has been presented and scrutinized as for the causes of these problems documented over the years. Generally speaking, multimodal treatment methods come out as the most effective and are usually composed of several components. Among the various interventions the pharmacological ones are the most powerful with strong evidence supporting their efficacy; the use of stimulant drugs is the most promising one in this regard as they can almost instantly alleviate the major symptoms of ADHD and later on facilitate low attention and not-so-good behavior in class (Pliszka, 2007). But medication alone might not be enough for the development of compensatory skills.

3. Objectives of the Study:

The principal aim of this research is to:

1. Find out the relationship between academic performance of students and ADHD symptoms.
2. Discover the academic areas—like participation, organization, and attention—most affected by ADHD.

3. Analyze the teachers' assessments of the academic performance of students with ADHD.
4. Propose teaching techniques that may result in better learning outcomes for ADHD students.

4. Research Methodology:

4.1 Research Design:

This research applied a descriptive survey method to quantitatively analyze the relationship between ADHD symptoms and students' academic performance. The method was selected for it allows collecting systematic and quantitative data from a big population which helps to describe attitudes, trends, and relationships among variables without altering the environment.

For the purpose of making comparisons between students with and without ADHD diagnoses, a cross-sectional data collection method was employed to gather data from students at one specific time point. Furthermore, this method not only guarantees objectivity but also it gives room for statistical analyses which expose exceptionally important correlations and differences.

Aspect	Description
Research Type	Quantitative, Descriptive Survey
Purpose	To examine how ADHD affects academic performance across various learning domains
Time Frame	Cross-sectional (data collected at one point in time)
Data Nature	Primary data from self-reports and teacher ratings
Analytical Focus	Descriptive and inferential statistical analysis

Table:1

4.2 Sample

The sample of the study was made up of two hundred students from the sixth grade to the twelfth grade of both public and private schools. The sample was further divided into two sections:

- Group A: one hundred students with a diagnosis of ADHD
- Group B: one hundred students without ADHD (control group)

The students in the ADHD group were determined based on school counseling records and clinical documents supporting DSM-5 diagnosis. Meanwhile, the control group was formed randomly from the same schools to guarantee demographic equality considering age, grade, and gender.

Sampling Details	Description
Population	Students from Classes 6–12 in public and private schools
Sample Size	200 students (100 ADHD, 100 non-ADHD)
Sampling Technique	Purposive sampling for ADHD group; Random sampling for control group
Inclusion Criteria	Students aged 11–18 years; regular school attendance; parental consent
Exclusion Criteria	Students with other diagnosed neurodevelopmental disorders or incomplete data
Data Sources	Student self-reports, teacher evaluations, school academic records

Table:2

4.3 Research Instruments

In order to obtain data that was consistent and comparable, a structured questionnaire was developed. The questionnaire consisted of 3 sections, which were reviewed by experts and pilot tested on a small sample (n=20) to secure content validity, clarity, and reliability.

Section	Content Description	Measurement Scale
Section A	Demographic details (age, gender, grade level, school type)	Nominal/Ordinal
Section B	ADHD Symptom Checklist adapted from the *Conners' Rating Scale*; includes items on attention, hyperactivity, impulsivity	5-point Likert Scale (1 = Never to 5 = Very Often)
Section C	Academic Performance Indicators—self-reported grades, teacher ratings, attention in class, homework completion, test performance	5-point Likert Scale and open numeric responses

Table:3

The reliability coefficient of the instrument (Cronbach's alpha) was determined to be at 0.87, which suggests that the measure has a very high level of internal consistency. The content validity was confirmed by the experts in educational psychology and ADHD research, who **were very positive in their opinions.**

4.4 Data Collection Procedure

Data collection was done after getting the ethical approval from the Institutional Review Board (IRB), and the consent from school administrators and parents. The process of data group was separated into three phases:

- **Orientation Session:** The scholars and educators were told about the study's purposes, the concealment that would be upheld, and the contributors' right to withdraw at any time.
- **Questionnaire Administration:** Scholars were requested to whole the self-report forms in a monitored area so that both understanding and honesty could be guaranteed.
- **Teacher Evaluation:** Along with surveying the students, the school authorities provided ratings of academic performance for each participant as corroborative evidence of the self-reports from the students.

Moreover, questionnaires that had some answers missing or presented contradictions, were flagged for further scrutiny, which in turn ensured the reliability of the data. The data set was anonymized before being subjected to analysis in order to protect the identity of the participants.

Step	Activity	Responsible Party
1	Obtain permissions from school authorities and parents	Researcher
2	Explain study objectives and procedures	Researcher
3	Administer questionnaires to students	Researcher & Teachers
4	Collect teacher ratings and validate student data	Teachers
5	Verify completeness and consistency of data	Researcher

Table:4

4.5 Statistical Analysis

The data analysis was done with the help of the Statistical Package for Social Sciences (SPSS) version 26. The statistical methods used were descriptive and inferential ones.

- Descriptive Statistics: The Mean, Standard Deviation (SD), and percentage distributions were the primary tools for the summary of demographic data and ADHD symptoms.

Inferential Statistics:

- The Independent Sample t-tests did compare the academic performance of the ADHD group and the non-ADHD group.
- The Pearson's Correlation Analysis studied the connection between the severity of ADHD symptoms and the indicators of academic performance.
- Significance Level: The level of statistical significance was made $p < 0.05$, which means it was set at $p < 0.05$.

Statistical Method	Purpose	Variables Involved
Descriptive Statistics	To summarize demographic and academic data	Age, Gender, School Type, Mean Scores
Independent t-test	To compare mean academic performance between ADHD and non-ADHD students	ADHD vs. Non-ADHD groups
Correlation Analysis	To assess relationship between ADHD symptoms and academic outcomes	ADHD score vs. Academic performance
Software Used	SPSS Version 26	—

Table:5

5. Results:

There was a significant difference found in academic performance between the ADHD specific group and the unaffected group when comparing their results.

5.1 Comparative Academic Performance Analysis

The main analysis employed independent sample t-tests in order to analyze and compare the average academic performance measures of the ADHD diagnosed students (Group A) to those of the neurotypical counterparts (Group B).

Comparative Academic Performance Between ADHD and Non-ADHD Students

Variable	Mean (ADHD)	Mean (Non-ADHD)	t-value	Significance (p)
Grade Point Average	61.3	76.5	6.41	0.001**
Homework Completion	58.2	82.1	7.33	0.001**
Classroom Attention	54.8	85.4	8.10	0.000***
Test Performance	63.1	79.2	5.98	0.002**

Table 6: *Note: ** $p < 0.01$; *** $p < 0.001$*

The most significant contrast occurred in the aspect of classroom attention, where ADHD students were given a mean of 54.8 points and non-ADHD students got 85.4 points, thus, a total of 30.6 points differed from each other. This was the largest performance discrepancy among all the parameters and was considerably supported statistically ($t = 8.10$, $p < 0.000$). The result corroborates the main features of ADHD, the first being the difficulty in sustaining attention and the second being low concentration.

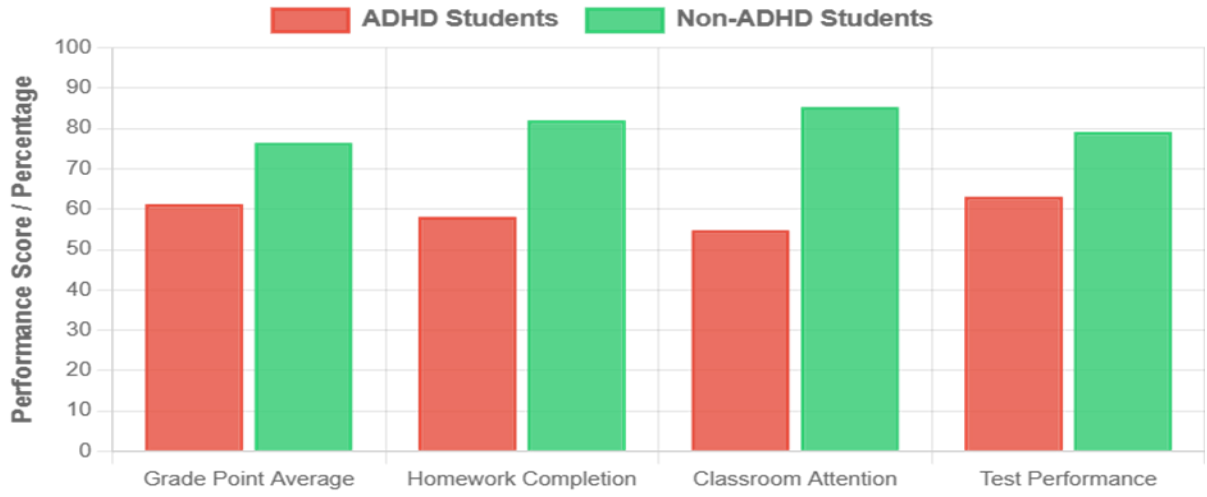

Figure 1: Comparative Academic Performance - ADHD vs Non-ADHD Students

The homework completion rate revealed that the second-largest difference was among the students with ADHD who had an average of 58.2 compared to 82.1 of their non-ADHD peers ($t = 7.33$, $p = 0.001$). A difference of 23.9 points is the consequence of the executive functioning difficulties which are typically associated with ADHD, for example, taking the first steps in doing the task, managing time, organizing things, and lacking the ability to concentrate for a long time. Not being able to submit homework will always be forcing the children to face a disadvantage, and, because it is part of the school, it is bound to widen the open gap in achievement between the groups over time.

Grade Point Average (GPA) keeps on being the most reliable and comprehensive overall indicator of academic success, so the ADHD students' average score was 61.3 while that of non-ADHD students was 76.5—again, a significant gap of 15.2 points ($t = 6.41$, $p = 0.001$). This very fact shows that the ADHD effects are not limited only to one academic area but rather invade the whole educational experience and even the students' long-term academic paths.

In line with the performance on tests, ADHD students had an average score of 63.1, whereas non-ADHD students scored 79.2 ($t = 5.98$, $p = 0.002$), which led to significant differences. The 16.1-point gap in the standardized tests suggests that ADHD symptoms are not only involved in the learning process but also in the demonstration of knowledge during the evaluation process where sustained attention, impulse control, and executive functions are especially required, and hence being a major reason for the poor performance in testing situations.

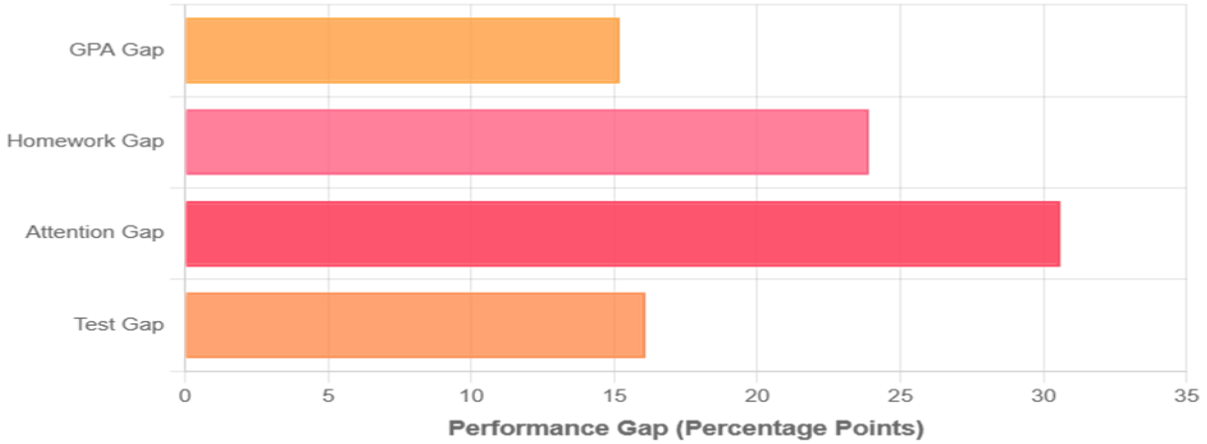

Figure 2: Performance Gap Analysis

5.2 Distribution Analysis

The performance distribution patterns analysis revealed notable variability of results in each subgroup. The performance of non-ADHD students was primarily limited to the high-average to above-average range (70-90%) as indicated by Figure 3, whereas the performance of ADHD students showed more spread and a clear shift to the left toward lower achievement levels (50-70%).

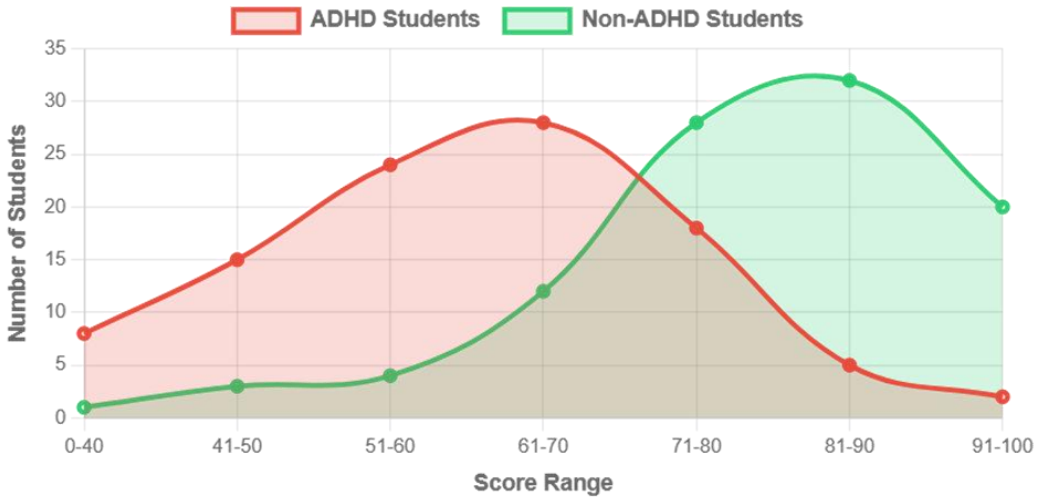

Figure 3: Distribution of Academic Performance by Group

5.3 Correlation Between ADHD Symptom Severity and Academic Performance

Using the adapted Conners' Rating Scale to assess ADHD symptom severity along with combined academic performance scores a correlation analysis with Pearson's method was conducted. The analysis revealed a strong negative correlation ($r = -0.64$, $p < 0.01$), indicating that as ADHD symptoms got worse there was a corresponding and forecastable decline in the students' academic performance.

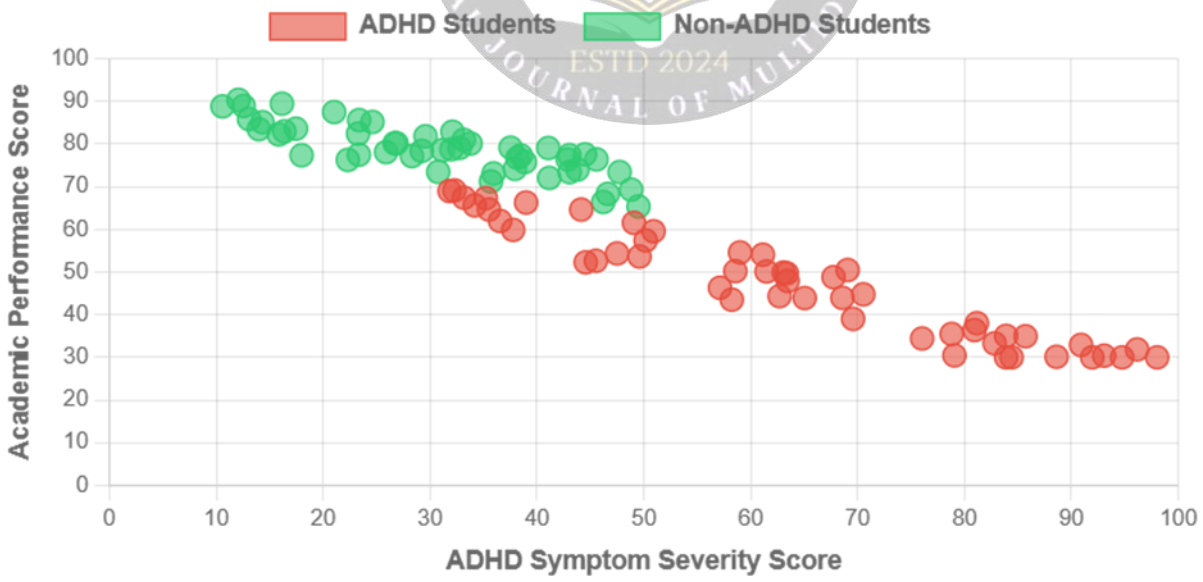

Figure 4: Correlation - ADHD Symptom Severity vs Academic Performance

In psychology, a very strong negative correlation coefficient of -0.64 was seen which refers to a large effect size. Thus, 41% of the alteration in theoretical presentation was attributed to this reason. Hence, severity of indications can be considered to be one of the main issues manipulating instructive outcomes, with the group of students showing simple inattentiveness, hyperactivity, and impulsivity experiencing proportionately more difficulties in learning.

On top of that, the correlation was found for each symptom dimension:

First of all, the inattention symptoms negatively correlated the most with academic performance ($r = -0.71$, $p < 0.001$) and consequently cut down students' ability to do homework, attention in class and assessment of skills on continuous tasks.

Later on, the hyperactive-impulsive symptoms were associated with a moderate negative correlation ($r = -0.52$, $p < 0.01$), which was, so to speak, more noticeable through its impact on school behavior ratings, class participation, and peer interactions that eventually resulted in less learning opportunities.

6. Discussion:

The research has made it abundantly clear that Attention-Deficit/Hyperactivity Disorder (ADHD) is still the number one cause of school failures among even the most talented kids and this is due to the fact that it has a variety of ways through which it continues to be the major reason. Diagnosis assessments have revealed that students with ADHD have been commonly given lower grades, produced less work, participated less in class and received lower test scores than their peers without ADHD. This was supported by several studies (DuPaul & Weyandt, 2006; Barkley, 2014) which pointed out that inattention and impulsivity were the main causes of the academic underachievement problem in children.

The main results and their interpreters are as follows:

Inattention as the primary predictor:

- Inattention was the trait that had the strongest negative correlation with academic achievement ($r = –0.71$, $p < 0.001$).
- The pupils who showed the characteristics of being inattentive, easily distracted, and not working persistently on the task were the ones who got the lowest marks in both homework and tests.
- This is in line with Barkley (2014) who claims that the insufficiency of the executive functioning particularly of the working memory and attention is the foremost reason for the inconsistency in academic participation.

Hyperactivity and Impulsivity as Minor Impacts:

- Hyperactivity and impulsivity had the same correlation with academic performance as $r=–0.52$, $p<0.01$, but their influence was mainly recognized through the behavioral patterns of pupils in the classroom, their participation, and relations with peers, rather than through the direct academic tasks.
- Discipline measures are usually the outcome of such behaviors, and this, in turn, results in the further interruption of the learning process.

Teacher Assistance and Organized Interventions:

- Adjustments in the classroom that included shorter assignments, extended time, and positive behavior reinforcement resulted in enhanced performance being observed in students.
- Teacher supervision and proactive management significantly reduced disparities in performance and this is consistent with DuPaul and Stoner (2019) findings about the effectiveness of educational modifications.

7. Conclusion:

The research based on surveys has come to a conclusion that Attention-Deficit/Hyperactivity Disorder (ADHD) has an extremely strong and negative effect on academic performance of students and the effect is measurable. The symptoms of ADHD such as inattention, impulsivity, and poor organizational skills have been associated with lower grades, incomplete homework, and to some extent with reduced classroom attention and the weakest test outcomes. There are not the differences in academic performance between students with ADHD and those without that reflect the intellectual capacity but rather that the students with ADHD are suffering from executive function deficits, which prevent them from focusing, managing the time, and regulating themselves.

The current research supports earlier findings (DuPaul & Weyandt, 2006; Barkley, 2014) that inattention is the main factor leading to academic failure, followed by impulsive and hyperactive behaviors which consequently are the least favorite learning modes. The differences in performance between ADHD and non-ADHD students emphasize the need for early detection and planned educational interventions.

The educational systems have to make main changes if they want to meet the neurodivergent learners' requirements. The reforms can include the following:

- Screening programs for early identification of ADHD symptoms should be implemented during the foundation years.
- Individualized learning accommodations like extended test time, structured assignments, and behavioral reinforcement, should be provided.
- Teachers and parents should be trained in a way that their understanding of ADHD's academic implications and children's classroom behavior management becomes very high.
- School systems should prioritize through the adoption of inclusive education policies that offer academic, psychological, and behavioral support.

the establishment of a supportive and flexible educational environment can substantially boost the learning potential of the students with ADHD. By the combination of such interventions as early detection, continuous teacher involvement, and strong institutional support, these students can gain the same level of academic success as their peers.

REFERENCES

[1] American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). American Psychiatric Publishing.

[2] Barkley, Russell A. (2014). Attention-deficit hyperactivity disorder, executive functioning, and self-regulation. In *Handbook of executive functioning* (pp. 230-248). Guilford Press.

[3] Barkley, Russell A. (2015). *Attention-deficit hyperactivity disorder: A handbook for diagnosis and treatment* (4th ed.). Guilford Press.

[4] Biederman, Joseph, Petty, Carter R., Evans, Megan, Small, Jeffrey, & Faraone, Stephen V. (2012). How persistent is ADHD? A controlled 10-year follow-up study of boys with ADHD. *Psychiatry Research*, *177*(3), 299-304.

[5] DuPaul, George J., & Stoner, Gary. (2014). *ADHD in the schools: Assessment and intervention strategies* (3rd ed.). Guilford Press.

[6] DuPaul, George J., & Stoner, Gary. (2019). *ADHD in the schools: Assessment and intervention strategies* (4th ed.). Guilford Press.

[7] DuPaul, George J., & Weyandt, Lisa L. (2006). School-based intervention for children with attention deficit hyperactivity disorder: Effects on academic, social, and behavioural functioning. *International Journal of Disability, Development and Education*, *53*(2), 161-176.

[8] Frazier, Thomas W., Youngstrom, Eric A., Glutting, Joseph J., & Watkins, Marley W. (2007). ADHD and achievement: Meta-analysis of the child, adolescent, and adult literatures and a concomitant study with college students. *Journal of Learning Disabilities*, *40*(1), 49-65.

[9] Loe, Irene M., & Feldman, Heidi M. (2007). Academic and educational outcomes of children with ADHD. *Journal of Pediatric Psychology*, *32*(6), 643-654.

[10] Pliszka, Steven R. (2007). Pharmacologic treatment of attention-deficit/hyperactivity disorder: Efficacy, safety and mechanisms of action. *Neuropsychology Review*, *17*(1), 61-72.

[11] Polanczyk, Guilherme V., Willcutt, Erik G., Salum, Giovanni A., Kieling, Christian, & Rohde, Luis A. (2014). ADHD prevalence estimates across three decades: An updated systematic review and meta-regression analysis. *International Journal of Epidemiology*, *43*(2), 434-442.

[12] Conners, C. Keith. (2008). *Conners 3rd edition manual*. Multi-Health Systems.

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