

Effect of Attention-Deficit on Self-Efficacy and Academic Performance in Secondary School Going Children: A Comparative Cross-Sectional Study

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Abstracts: Background: Attention deficit poses a significant challenge to students' ability to focus, regulate their behavior, and manage academic tasks effectively. Evidences are present to support the influence of attention deficit on self-efficacy and academic performance among secondary level students. The study aims to identify the relationships between attention deficit, self- efficacy beliefs, and academic outcomes. Objectives: To determine the effect of attention deficit on self-efficacy and academic performance in secondary school going children. Data collection procedure: A sample of 145 students according to inclusion criteria was selected. The mean age of current study population was 15 years, with standard deviation of 0.92. Participants were divided into two groups by ADHD-RS-IV Questionnaire score, i.e., Group 1 without attention deficit with 63 participants in this group and Group 2 with attention deficit with 81 participants in this group. Sample size was calculated using open epi calculator. Non- probability convenient sampling technique was used for recruitment. Attention deficit was assessed using ADHD-RS-IV Questionnaire and Self-efficacy was assessed using SEQ-C Questionnaire. The overall duration of study was 5 months. Welch's test was used to compare the self-efficacy and academic performance in students with and without attention deficit. Results: The Welch's test showed highly significant difference (P-Value <0.001) between the two groups. This revealed that the students without attention deficit have higher self-efficacy and academic performance compared to students with attention deficit. Conclusion: The study concluded that there was the difference between self-efficacy and academic performance of students with and without attention deficit. The students who are not attention deficit have high self-efficacy and academic performance and the students who are attention deficit have low self-efficacy and academic performance.

Keywords: Attention-Deficit, Self-Efficacy, Academic Performance, Secondary Level Students.

1. INTRODUCTION

Adolescence is a critical phase in human development, marked by the emergence of newabilities, talents, skills, self-assurance, and accomplishments amid significant physical, cognitive, social, and psychological transformations. Throughout this transitional period, the appreciation of self-worth and self-confidence positively influences academic achievements, forming a foundational basis for career decisions among adolescents.

Consequently, academic performance plays a pivotal role in guiding the future direction of adolescents.(1) Self-efficacy affects the children learning, motivation, self-regulationsand achievements.(2)

ATTENTION-DEFICIT HYPERACTIVE DISORDER

Attention-deficit hyperactive disorder (ADHD) is a **neuro-developmental condition characterized by a persistent pattern of inattention, hyperactivity, and/or impulsivity**.(3) These symptoms can substantially disrupt an individual's everyday tasksand relationships. Onset typically occurs in childhood, and the condition may persist intoadolescence and adulthood.(4) ADHD is associated with diverse neurobiological pathways and varied neuropsychological profiles.(5)

Symptoms of ADHD

People with ADHD consistently display the following traits:

- Inattention**, which involves difficulties in sustaining focus and attention.
- Hyperactivity**, marked by elevated energy levels, excessive movement, and excessive talking.
- Impulsivity**, characterized by actions taken without careful consideration or challenges in self-control.

ADHD may present predominantly as inattention, hyperactivity-impulsivity, or a combination of both.(6)

Prevalence: Attention-deficit hyperactivity disorder (ADHD) is a prevalent behavioral disorder in childhood. According to comprehensive reviews, the worldwide prevalence in the community falls within the range of 2% to 7%, with an average around 5%.

Additionally, approximately 5% of children experience significant challenges related to over-activity, inattention, and impulsivity, falling just below the criteria required for a complete ADHD diagnosis. Administrative prevalence estimates, encompassing clinically diagnosed or recorded cases, exhibit global variation and have shown an upward trend over time.(7) Consistent research results consistently indicate that boys are more likely to be diagnosed and receive treatment for symptoms related to ADHD than girls. The ratios of ADHD diagnoses between males and females range from 2:1 to 10:1, with clinical samples typically showing higher ratios than population-based samples.(8) Recent research over the past decade has demonstrated that ADHD can continue into adulthood. (2)

INATTENTION

In adults, inattention is a cognitive challenge marked by a diminished capacity to sustain focus, maintain attention, and accomplish tasks that demand prolonged concentration.(9)

Signs of Inattention Include

Indications of inattention may involve difficulties in:

- Attending to details, leading to apparent oversights at work or in other activities.
- Maintaining focus on lengthy tasks, such as creating reports, completing forms, or reviewing extensive documents.
- Actively listening when directly addressed.
- Following instructions and completing tasks in a timely manner in a work setting.
- Organizing tasks, managing time, and participating in activities requiring sustained attention.
- Keeping track of personal items like keys, wallets, and phones.
- Being prone to distraction by unrelated thoughts or stimuli.
- Exhibiting forgetfulness in daily activities, including bill payments, appointment keeping, or returning calls.

HYPERACTIVITY/IMPULSIVITY

In adults, hyperactivity/impulsivity is characterized by a pattern of behaviors involving heightened restlessness, impulsive actions, and challenges in exercising self-control.(9) **Signs of hyperactivity and impulsivity may include:**

- Encountering intense restlessness, struggling to sit still for prolonged periods, or causing fatigue in others due to excessive activity.
- Engaging in fidgeting, tapping hands or feet, or squirming in one's seat.
- Being unable to participate quietly in leisure activities.
- Talking excessively.
- Providing responses before questions are fully asked.
- Finding it challenging to wait one's turn, for instance, while in line.
- Interrupting or intruding on others.

ADHD can coexist with various mental disorders, such as anxiety, mood, and substance use disorders.(10)

How is ADHD Diagnosed in Adults?

By the standards of the most recent DSM-IV-TR criteria, **“a child with ADHD has difficulty sustaining attention in tasks or play activities.”** (3) ADHD is a condition that originates in childhood and persists into adulthood. Individuals diagnosed with ADHD in adulthood have demonstrated several ADHD symptoms before the age of 12. As adults, they currently exhibit a minimum of five enduring symptoms related to inattention and/or five persistent symptoms associated with hyperactivity-impulsivity. These symptoms need to manifest in two or more settings (such as home, work, or school; with friends or relatives; in other activities) and disrupt or diminish the quality of social, academic, or occupational functioning.(5) For a diagnosis, symptoms must be evident in two or more settings before the age of 12 for at least 6 months, leading to a reduction or impairment in social, academic, or occupational functioning. In adolescents over 17 years and in adults, a diagnosis requires the presence of five symptoms per dimension. Similar symptoms to ADHD can be triggered by stress, other mental health issues, and physical conditions or illnesses. Hence, a comprehensive assessment conducted by a healthcare provider or mental health professional is essential to pinpoint the underlying cause of the symptoms and devise effective treatments. Throughout this evaluation, the healthcare provider or mental health professional will scrutinize factors such as the individual's mood, medical history, and potential challenges like alcohol or substance misuse.(11) A comprehensive assessment also involves examining the individual's childhood behavior and school experiences. To gather this information, the healthcare provider might request permission to communicate with partners, family members, close friends, and others familiar with the individual. Standardized behavior rating scales or checklists for ADHD symptoms may be employed by a healthcare provider or mental health professional to assess whether an adult fulfills the criteria for an ADHD diagnosis. Psychological tests focusing on working memory, executive functions (such as planning and decision-making), visual and spatial abilities, and reasoning skills may be administered. These tests serve to identify strengths and challenges in psychological or cognitive domains and help pinpoint or rule out potential learning disabilities.(12)

SELF-EFFICACY

Self-efficacy highlights **“an individual's belief in his or her capacity to execute behaviors necessary to produce specific performance attainments (Bandura, 1986).”** Self-efficacy is the confidence an individual has in their capability to effectively perform tasks, overcome challenges, and attain particular goals. It encompasses the

belief in one's ability to influence their own motivation, behavior, and social interactions. Essentially, self-efficacy represents the perception of competence and effectiveness in diverse situations. Pioneered by psychologist Albert Bandura, this concept is pivotal in shaping decisions, level of exertion, perseverance, and adaptability when confronted with challenges.(13) Though the concept of **self-esteem** has similarities, it predominantly focuses on an individual's emotional evaluation of their own value. Conversely, **self-efficacy** involves an individual's evaluation of their capability to achieve a goal or their belief in their capacity to accomplish it.(14)

Self-Efficacy Theory

Bandura postulated that achieving goals involves at least two essential components:

- **Outcome expectations**, which signify the belief that proficiently performing a particular behavior will result in a specific outcome.
- **Efficacy expectations**, indicating the belief that one has the capability to execute those specific behaviors in the first instance.(15)

Principles of Self-Efficacy

Self-efficacy is the major concept of Bandura's social cognitive theory. Self-efficacy is influenced by four important sources of information. Bandura outlined four primary origins of self-efficacy. The attainment of self-efficacy occurs through mastery experiences, social modeling, social persuasion, and psychological responses.

- **Mastery Experiences:** According to Bandura, the most impactful method for cultivating a robust sense of efficacy is through mastery experiences. Successfully completing a task enhances our confidence in our abilities. Conversely, struggling or failing to handle a task can diminish and erode self-efficacy.(16)
- **Social Modeling/ Vicarious Experiences:** Observing individuals effectively accomplish a task is another significant contributor to self-efficacy. Bandura suggests that witnessing people similar to oneself succeed through persistent effort heightens the belief in observers that they also have the abilities to master similar activities and achieve success.(17)
- **Social Persuasion/ Verbal persuasion:** Bandura also argued that individuals can be influenced to believe in their skills and capabilities for success. Think about a situation when someone provided positive and encouraging words that aided you in reaching a goal. Receiving verbal support from others assists individuals in overcoming self-doubt and encourages them to channel their efforts towards giving their best in the current task.(17)
- **Emotional and Psychological Responses:** Our personal responses and emotional reactions to situations significantly influence self-efficacy. Moods, emotional states, physical reactions, and stress levels all contribute to how an individual perceives their abilities in a given situation. For instance, someone who experiences intense nervousness before speaking in public may develop a diminished sense of self-efficacy in such scenarios.(17)

Components of Self-Efficacy

In my study, I investigate three specific aspects of self-efficacy among students: academic self-efficacy, social self-efficacy, and emotional self-efficacy.

1. Academic Self-Efficacy

Academic self-efficacy pertains to students' beliefs and outlook on their capacity to attain academic success,

including their confidence in completing academic tasks and successfully mastering the learning materials.(18)In an academic context, it can be inferred that students with elevated self-efficacy exhibit greater motivation to learn, leading to increased academic performance. This is because these learners hold the belief that they possess the capability to accomplish their academic goals.(14)

2. Social Self-Efficacy

Social self-efficacy typically connects an individual's interpersonal relationships with their self-efficacy. According to Smith and Betz, it is characterized as an individual's confidence in their capability to engage in the social interactive tasks necessary for maintaining personal relationships.(19)Social self-efficacy in adolescents pertains to their capacity to overcome challenges and obstacles in social contexts. Having robust positive beliefs about one's social efficacy fosters the development of new or robust relationships. Conversely, a deficiency in social efficacy may incline individuals towards participating in relatively more antisocial behaviors, such as aggression (e.g., physical fighting or bullying) and experiencing victimization.(20)

3. Emotional Self-Efficacy

Emotional self-efficacy involves the capacity to internally regulate emotions rather than expressing them externally. In younger children, the manifestation of emotions often includes behaviors like throwing temper tantrums and screaming to convey displeasure or engaging in lively activities like dancing and twirling to express joy.(21)Individuals with high emotional efficacy can skillfully navigate through challenging emotions, manage their emotions using healthy coping mechanisms, and demonstrate their values through their actions. On the other hand, those with low levels of emotional efficacy tend to engage in patterns of maladaptive behavioral responses and loneliness experiences.(22)

High self-efficacy is linked to heightened motivation, improved performance, and enhanced psychological well-being. (12) Students with high self-efficacy often display certain positive behaviors and characteristics, including:

1. **Confidence:** They confidently believe in their capacity to excel in academic tasks and overcome challenges.
2. **Persistence:** They exhibit perseverance when confronted with difficulties, considering challenges as chances for learning and improvement.
3. **Motivation:** They are driven to establish and attain ambitious goals, guided by the conviction that their efforts will result in success.
4. **Active Learning:** They actively participate in the learning process by seeking information, engaging in class discussions, and taking the initiative in their studies.
5. **Resilience:** They recover quickly from failures, regarding them as temporary and specific to a particular situation rather than a reflection of their overall abilities.
6. **Effective Problem-Solving:** They approach problems with a mindset geared towards finding solutions, utilizing their skills and knowledge.
7. **Positive Self-Image:** They possess a favorable view of themselves and their abilities, contributing to a positive self-esteem.
8. **Openness to Challenges:** They are inclined to embrace challenging tasks, viewing them as opportunities for personal growth rather than threats.

It's essential to recognize that self-efficacy is context-specific, meaning that a student may have high self-

efficacy in certain academic areas or tasks while having lower self-efficacy in others. Fortunately, you can develop and enhance self-efficacy as a psychological skill. Begin by finding ways to integrate Bandura's factors of self-efficacy into your life. Strategies to cultivate self-efficacy include recognizing your accomplishments, observing mentors, receiving positive feedback, and engaging in positive self-talk.(1)

Prevalence: One of the study revealed that the self-efficacy levels among females were higher than those among adolescent males.(1) Bandura asserts that the elevated self- efficacy observed in females stems from their emotional states when undertaking a particular task and their inherent beliefs. These factors contribute to the development of self-confidence, problem-solving approaches, positive cognitive skills, and goal orientation among girls.(23)

ACADEMIC PERFORMANCE

Academic performance **refers to the assessment of a student's accomplishments in diverse academic subjects.** Typically, educators and educational authorities typically measure achievement through classroom evaluations, graduation rates, and outcomes from standardized tests.(24)

1. Methods for evaluating student learning include:

1. Summative assessments, which involve tests, quizzes, and graded course activities to gauge overall student performance.

2. Formative assessment, encompassing any approach through which students receive feedback and guidance on their performance to facilitate improvement.

One of the study show that females exceed males in almost all disciplines at various levels of the educational ladder. Various factors contribute to the academic achievements of both males and females in senior high school and tertiary education. These factors encompass the socialization process, gender norms, characteristics of subjects and learning preferences, and individual-level attributes, among others.(25)

IMPACT OF ADHD ON SELF-EFFICACY

Adults with ADHD frequently experience a range of adverse life outcomes and challenges in achieving success due to their neuropsychological impairments. Specifically, difficulties in interpersonal relationships, academic pursuits, and professional endeavors are commonly observed in individuals with ADHD. Research indicates a correlation between ADHD and reduced self-esteem in adulthood.(26) Additionally, approximately 70% to 75% of adults dealing with ADHD encounter concurrent mental health challenges, notably anxiety disorders, depression, and substance use disorders. Consequently, a variety of adverse experiences impact the formation of an individual's self-esteem and belief in their own capabilities. Negative notions about their skills emerge, prompting individuals to navigate through demanding circumstances.

Through the use of dysfunctional coping strategies like avoidance and procrastination, adults with ADHD sustain and reinforce their negative self-perception while grappling with underlying issues. Caught in this harmful cycle, individuals go through a persistent series of letdowns, contributing to the frequently observed reduced self-efficacy in adultswith ADHD.(27)

IMPACT OF ADHD ON ACADEMIC PERFORMANCE

Challenges in academics frequently arise in individuals with ADHD, often leading to their initial referral for clinical assessment. Academic difficulties can significantly impact future functioning. Past research has classified academic outcomes into two categories: those pertaining to knowledge and skills acquired (measured through standardized academic achievement tests, termed academic achievement), and those associated with performance in the school environment (including grades, years of schooling completed, grade retention, and

college enrollment, referred to as academic performance). These two outcome types are typically analyzed independently, recognizing that achieving success in school demands a broad range of skills beyond mere information acquisition. (3) The fundamental symptoms of ADHD, namely inattention, hyperactivity-impulsiveness, or a blend of both, can adversely affect cognitive abilities. Numerous research findings indicate that early challenges in attention are linked to future difficulties in reading, mathematics, and overall academic performance. Deficiencies in working memory, along with issues related to inattention and hyperactivity, contribute to the observed setbacks in achievement test scores and academic success among students with ADHD. Additionally, it's noteworthy that ADHD often coexists with learning disorders in language, reading, and math, and the combined impact of these comorbidities may further influence academic outcomes. (3) . ADHD has been found to have a negative impact on academic functioning thereby contributing to depression, frustration and anxiety (28) as well as hindering self-efficacy. ADHD negatively influences academic performance by interfering with focus, concentration and impulse control, leading to difficulty learning and retaining knowledge.

IMPACT OF SELF-EFFICACY ON ACADEMIC PERFORMANCE

The impact of self-efficacy on academic interest and motivation is robust, significantly forecasting the academic achievement of adolescents. Research suggests a strong correlation between a robust sense of self-esteem and self-efficacy and academic performance, a relationship extensively explored. Individuals with elevated self-esteem and self-efficacy demonstrate a greater inclination to tackle academically challenging tasks, whereas those with lower self-esteem and self-efficacy tend to avoid new or challenging endeavors.(1)

2. LITERATURE REVIEW

In 2021, F. Celebi et.al did a study on “**Self-esteem and clinical features in a clinical sample of children with ADHD and social anxiety disorder**” and concluded that children with inattentiveness should be assessed in terms of other co-morbidities like social anxiety disorder(SAD) as they have benign behavioral characteristics, then compare to just ADHD children (29)□□In 2016, S. H. Cheng et.al did a study on “**Factors related to self-reported attention deficit among incoming university students**” and concluded that university students are more likely to exhibit ADHD symptoms. Suicidal ideation is linked to adult ADHD, relational issues, inadequate social support, and a high co-morbidity of mental diseases (4)□□In 2022, E. Commodari et.al did a study on “**Interpersonal adaptation, self- efficacy, and metacognitive skills in Italian adolescents with specific learning disorders: A cross-sectional study**” and she concluded that specific learning disorder (SLD) is significantly linked to lower interpersonal skills and poor self- efficacy in children (30)□□In 2018, S. J. Kwon et.al did a study on “**Difficulties faced by university students with self-reported symptoms of attention-deficit hyperactivity disorder: a qualitative study**” and concluded that students with ADHD were aware of their challenges and tried to overcome them by affectively managing their time, by exercising self-control, and learning how to quit worrying.(28)

In 2023, M. Vnukova et.al did a study on “**Childhood School performance in adults diagnosed with attention-deficit/hyperactivity disorder**” and he concluded that children with ADHD usually struggle academically, struggle more with their behavior at school, receive notes for misbehavior, and are frequently chastised by teachers (31). In 2021, A. Sholeh et.al did a study on “**The Behaviorally Based Intervention Approach to Improve Self-Efficacy of Students' with Attention Deficit Hyperactive Disorder in Elementary School**” and concluded that self-efficacy in ADHD students can be improved through behaviorally based intervention approach. Teachers can also play vital role in enhancing the self-efficacy in elementary going students with ADHD (32). In 2021, P. Usan et.al did a study on “**Emotional regulation and academic performance in the academic context: The mediating role of self-efficacy in secondary education students**” and he concluded that there is significant correlation between self-efficacy and academic performance in adolescents. Changing the teaching methodology to enhance self-efficacy and assisting the students to feel more optimistic at school (33)

In 2020, M. Rigoni et.al did a study on “**Symptom level associations between attention-deficit hyperactivity disorder and school performance**” and he addresses a crucial area of concern, as the impact of ADHD symptoms on school performance has significant implications for the educational outcomes of affected individuals.

This relevance enhances the practical applicability of the study's findings.(34)□□ In 2021, N. D. Fogleman et.al did a study with the aim of investigating “**In- person victimization, cyber victimization, and poly-victimization in relation to internalizing symptoms and self-esteem in adolescents with attention- deficit/hyperactivity disorder**” and his study highlights the intricate links between face-to-face victimization, cyber victimization, and poly-victimization concerning internalizing symptoms and self-esteem among adolescents diagnosed with attention-deficit/hyperactivity disorder (ADHD). Moreover, the collective influence of multiple victimization incidents negatively influences the self-esteem of adolescents with ADHD.(35)

OBJECTIVES

The purpose of this study is

1. To determine attention deficit in secondary school going children.
2. To determine self-efficacy and academic performance in secondary school going children.
3. To determine the influence of self-efficacy on academic performance of secondary school going children.
4. To compare self-efficacy and academic performance of secondary school going children with and without attention deficit.
5. To determine the association of different components of attention deficit with different components of self-efficacy in secondary school going children.

3. MATERIALS AND METHODS

STUDY DESIGN

The study design used in the current study was Comparative cross-sectional analytical study.

STUDY SETTING

The research was conducted at the DIVISIONAL PUBLIC school of Rawalpindi. I took the permission to visit the school for data collection from my Dean. For this purpose, I was given a signed permission letter by my university Dean. In Divisional Public School and College Rawalpindi the research was carried out by taking permission from the mentioned School Principal as well.

DURATION OF STUDY

The study duration of my current study was 4 months. The time at which study was carried out was after approval of synopsis onwards to next 4 months. The exact date was 15 September 2023 to 15 January 2024.

SAMPLE SIZE

Sample size was calculated by using OPEN EPI SAMPLE SIZE CALCULATOR. By assuming, Confidence interval = 95%, Power = 80%, Ratio of sample size=1, with mean and standard deviation of group 1 as 26.5 and 4.5, mean and standard deviation of group 2 as 24 and 5. Calculated sample was 114 (36), but in order to attain exact data I took the sample size of 145 school students.

SAMPLING TECHNIQUE

- Non-probability (convenient sampling) technique was used in this study.

DATA COLLECTION INSTRUMENT

- A semi constructed questionnaire consisting, **DEMOGRAPHIC DETAILS** including the last class result to measure academic performance, **ADHD-RS-IV QUESTIONNAIRE** to measure attention deficit, and **SEQ-C QUESTIONNAIRE** to measure self-efficacy was used.
- ADHD-RS-IV questionnaire contain total of 18-items in 2 domains. The first 9 items assess inattentive symptoms. Last 9 items assess hyperactive-impulsive symptoms. In this study all the 2 domains are used.
- SEQ-C questionnaire contain total of 24-items in 3 domains. In this study all the 3domains are used.

Items 1, 4, 7, 10, 13, 16, 19, and 22 = Academic self-efficacy

Items 2, 6, 8, 11, 14, 17, 20, and 23 = Social self-efficacy

Items 3, 5, 9, 12, 15, 18, 21, and 24 = Emotional self-efficacy

Data Collection Procedure

A sample of 145 students according to the mentioned inclusion criteria was selected by using standard statistical formula. Data was collected from them by handed them the questionnaire and responses from those were collected and analyzed to get results from it.

Data Analysis

Data analysis was performed by using **SPSS version 25** and **Microsoft 365**.The statistical analysis was done by using **Welch’s test** to compare the self-efficacy and academic performance of Secondary school going students who are attention deficit and who are not attention deficit. The confidence interval was 95%. The final results were presented by drawing tables and graphs. The demographic data was presented in the form of frequency, percentage and mean depending on type of data.

RESULTS

Among 145 participants in which effect of attention deficit on self-efficacy and academic performance was observed, there were 63 participants in group 1 who have no attention deficit and 81 participants in group 2 who have attention deficit.

Age: The Mean age of the current study population was 15.00 with standard deviation 0.92. (Table-1)

Table-1: Mean and SD of Age

VARIABLE	MEAN	STANDARDDEVIATION
Age (years)	15.00	0.92

Gender: The frequency of Male in secondary school students was 74 with percentage of 51.0% and the frequency of Female in secondary school students was 71 with percentageof 49.0%. (Table-2) (Figure-1)

Table-2: Frequency and Percentage of Gender

VARIABLE (GENDER)	FREQUENCY	PERCENTAGE (%)
MALE	74	51.0
FEMALE	71	49.0

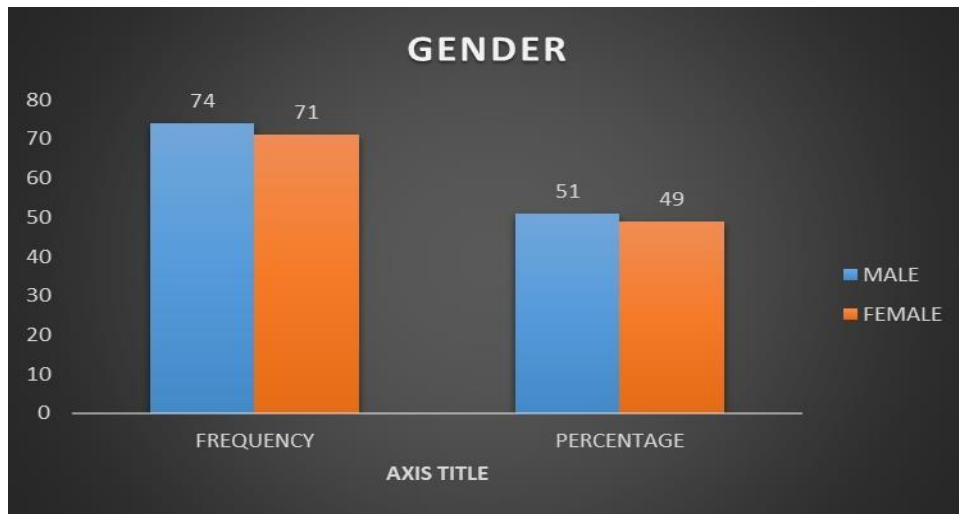


Figure- 1: Frequency and percentage of gender

Students of class 9th and 10th: The frequency of 9th class in secondary school students was 31 with percentage of 21.4% and the frequency of 10th class in secondary school students was 114 with percentage of 78.6%. (Table-3) (Figure-2)

Table-3: Frequency and Percentage Students of 9th and 10th Class

VARIABLE (CLASS)	FREQUENCY	PERCENTAGE
9 th CLASS	31	21.4
10 th CLASS	114	78.6



Figure- 2: Frequency and percentage of students of class 9th and 10th class

Attention deficit: The frequency of no attention deficit students of secondary level was 63 with percentage of 43.4%, the frequency of attention deficit likely students of secondary level was 81 with percentage of 55.9% and frequency of attention deficit students was 1 with percentage of .7%.

Table 4: Frequency and percentage of Attention deficit in secondary level students

VARIABLE	FREQUENCY	PERCENTAGE
NO AD	63	43.4
AD LIKELY	81	55.9
AD	1	.7

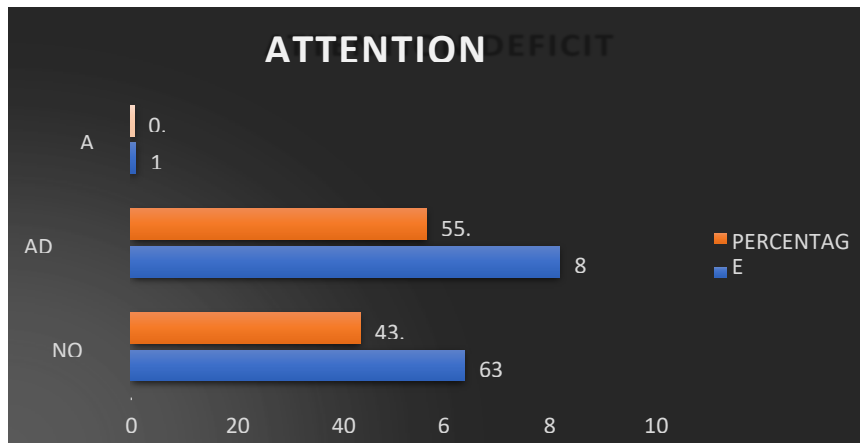


Figure 3: Frequency and percentage of Attention deficit

Comparison of Self-Efficacy and Its Different Components in Students with And Without Attention Deficit

The mean of self-efficacy, academic self-efficacy and emotional self-efficacy in secondary school going students with no attention deficit was 81.41, 28.93 and 27.23 with standard deviation of 12.35, 4.76 and 4.81 respectively, while the mean of self- efficacy, academic self-efficacy and emotional self-efficacy in secondary school going students with attention deficit was 72.17, 23.23 and 24.39 with standard deviation of 11.51, 4.73 and 5.34 respectively. This shows that students with no attention deficit have greater self-efficacy, academic self-efficacy and emotional self-efficacy than students with attention deficit as significant difference was found as P-value was <0.001. The mean of social self-efficacy with no attention deficit students was 26.14 with standard deviation of 5.21 and the mean of social self-efficacy with attention deficit students were 24.91 with standard deviation of 4.89 but no significant difference was found as P-value was greater than 0.05 i.e., 0.152. (Table 5) (Figure 4). So we can reject the null hypothesis to conclude that alternate hypothesis is true.

Table 5: Comparison of means of self-efficacy and its different components instudents with and without attention deficit.

VARIABLE	NO AD (MEAN±S.D)	AD LIKELY (MEAN±S.D)	P-VALUE
SEQ	81.41±12.35	72.17±11.51	<0.001***
Academic self- efficacy	28.93±4.76	23.23±4.73	<0.001***
Social self-efficacy	26.14±5.21	24.91±4.89	.152
Emotional self- efficacy	27.23±4.81	24.39±5.34	<0.001***

*** = P-Value <0.001 that shows it is highly significant.

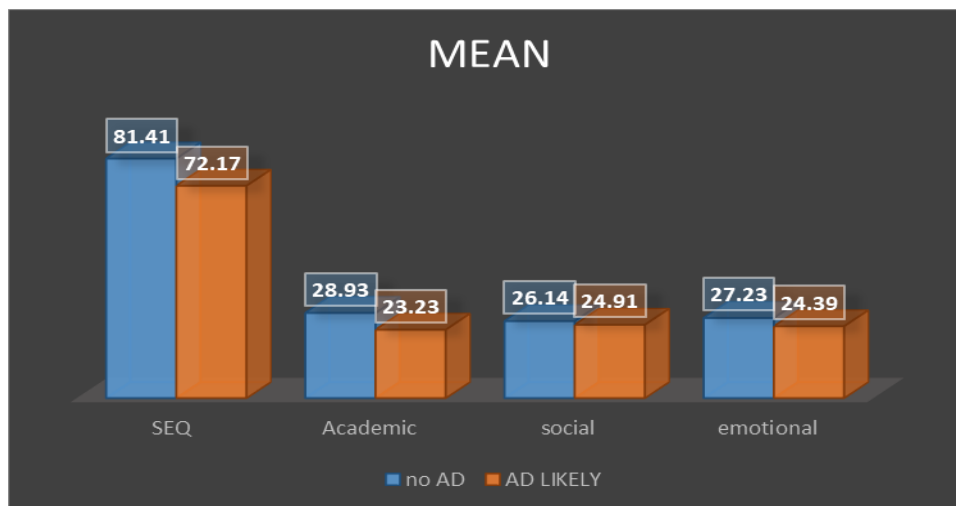


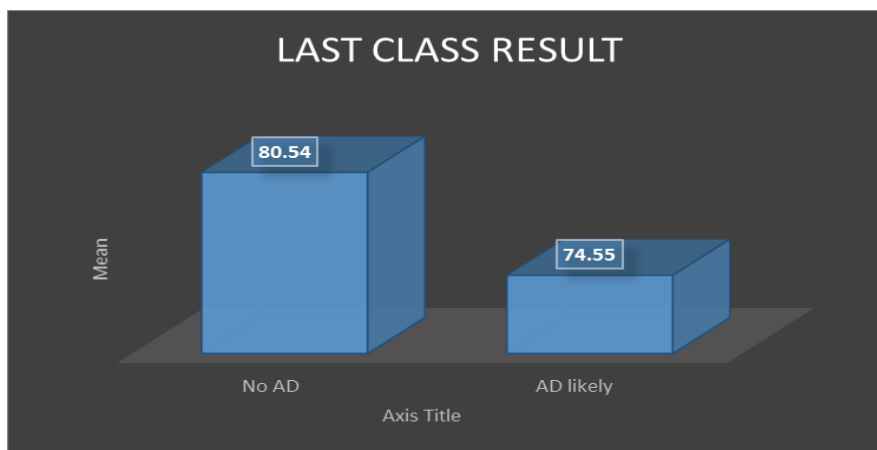
Figure 4: Comparison of means of self-efficacy and its different components instudents with and without attention deficit

Comparison of Academic Performance In Students With And Without Attention Deficient

The mean academic performance of participants in group 1 who have no attention deficit was 80.54 with standard deviation 12.16 and P value was <0.01 which means it is significant and the mean academic performance of participants in group 2 who have attention deficit was 74.55 with standard deviation 12.96 and P value was <0.01 which means it is significant. (Table 6) (Figure 5). So we can reject the null hypothesis to conclude that alternate hypothesis is true.

Table 6: Comparison of academic performance in students with and without attention deficient

VARIABLE	NO AD (group 1) (MEAN±S.D)	AD LIKELY (group 2) (MEAN±S.D)	P-VALUE
ACADEMIC PERFORMANCE	80.54±12.16	74.55±12.96	.005**



** = P-VALUE <0.01 that shows it is significant.

Figure 5: Comparison of academic performance in students with and without attention deficient

CORRELATION AND P-VALUE OF ADHD-RS-IV AND SEQ AND THEIR DIFFERENT COMPONENTS

When association was found between total ADHD and SEQ, and emotional self-efficacy weak association was found as the value of correlation co-efficient was 0.386 and 0.287 respectively. However, P-value for both was <0.001. The association was found between total ADHD and academic self-efficacy moderate association was found as the value of correlation co-efficient was 0.589. However, P-value was <0.001. The association was found between total ADHD and social self-efficacy very weak association was found as the value of correlation co-efficient was 0.064. However, P-value is not significant.

Pearson correlation was used to found these correlation coefficient values.

Table-7: Correlation coefficient and P value of ADHD, SEQ and its different components

VARIABLE	CORRELATION COEFFICIENT	P-VALUE
TOTAL ADHD - SEQ	-.386	<0.001***
TOTAL ADHD – ACADEMIC SELF-EFFICACY	-.589	<0.001***
TOTAL ADHD – SOCIAL SELF-EFFICACY	-.064	.441
TOTAL ADHD – EMOTIONAL SELF-EFFICACY	-.287	<0.001***

*** = P-Value <0.001 that shows it is highly significant.

The association was found between inattentive and SEQ, and emotional self-efficacy weak association was found as the value of correlation co-efficient was 0.391 and 0.290 respectively. However, P-value was highly

significant <0.001. The association was found between inattentive and academic self-efficacy strong association was found as the value of correlation co-efficient was 0.557. However, P-value was <0.001. The association was found between inattentive and social self-efficacy weak association was found as the value of correlation co-efficient was 0.126. However, P-value for this is not significant. Pearson correlation was used to found these correlation coefficient values.

Table 8: Correlation coefficient and P value of Inattentive, SEQ and its different components

VARIABLE	CORRELATION COEFFICIENT	P-VALUE
INATTENTIVE - SEQ	-.391	<0.001***
INATTENTIVE – ACADEMIC SELF-EFFICACY	-.557	<0.001***
INATTENTIVE – SOCIAL SELF-EFFICACY	-.126	.130
INATTENTIVE – EMOTIONAL SELF-EFFICACY	-.290	<0.001***

*** = P-Value <0.001 that shows it is highly significant.

The association was found between hyperactive and SEQ, and emotional self-efficacy weak association was found as the value of correlation co-efficient was 0.296 and 0.224 respectively. The association was found between hyperactive and academic self-efficacy moderate association was found as the value of correlation co-efficient was 0.484.

However, P-value was <0.001. The association was found between hyperactive and social self-efficacy very weak association was found as the value of correlation co-efficient was However, P-value was not significant. Pearson correlation was used to found these correlation coefficient values.

Table 9: Correlation coefficient and P value of Hyperactive, SEQ and its different components

VARIABLE	CORRELATION COEFFICIENT	P-VALUE
HYPERACTIVE -SEQ	-.296	<0.001***
HYPERACTIVE – ACADEMIC SELF-EFFICACY	-.484	<0.001***
HYPERACTIVE – SOCIAL SELF-EFFICACY	.005	.951
HYPERACTIVE – EMOTIONAL SELF-EFFICACY	-.224	.007**

*** = P-Value <0.001 that shows it is highly significant.

The association was found between last class result with total ADHD and its inattentive and hyperactive component weak association was found as the value of correlation co-efficient was 0.229, 0.233 and 0.170 respectively. However, P-value for total ADHD and inattentive was <0.005 while for hyperactive was <0.05.

Table 10: Correlation coefficient and P value of last class result, ADHD and its different components

VARIABLE	CORRELATION COEFFICIENT	P-VALUE
LAST CLASS RESULT – ADHD-RS-IV	-.229	.005**
LAST CLASS RESULT – INATTENTIVE	-.233	.005**
LAST CLASS RESULT – HYPERACTIVE	-.170	.041*

**= p-value <0 .01

*= p-value <0.05

The association was found between academic result and SEQ and its academic and emotional self-efficacy

components weak association was found as the value of correlation co-efficient was 0.260, 0.340 and 0.123 respectively. While the association was found between academic result and social self-efficacy very weak association was found as the value of correlation co-efficient was 0.087. However, P-value for academic self-efficacy is highly significant <0.001.

Table 11: Correlation coefficient and P value of last class result, SEQ and its different components

VARIABLE	CORRELATION COEFFICIENT	P-VALUE
LAST CLASS RESULT - SEQ	.260	.002**
LAST CLASS RESULT - ACADEMIC SELF EFFICACY	.340	<0.001***
LAST CLASS RESULT - SOCIAL SELF EFFICACY	.087	.300
LAST CLASS RESULT - EMOTIONAL SELFEFFICACY	.123	.139

DISCUSSION

The study aimed to explore how attention deficit affects the self-efficacy and academic performance of secondary level students. While numerous studies exist on the impact of attention deficit on these variables, there is a scarcity of research specifically focusing on secondary level students and simultaneously comparing attention deficit with both self-efficacy and academic performance. Furthermore, the current study concentrated on understanding the relationship between various components of attention deficit and self-efficacy in secondary school students, while also examining how self-efficacy influences academic performance. Findings revealed that students with attention deficit exhibited lower self-efficacy and poorer academic results compared to their non-attention deficit peers, who displayed higher self-efficacy and better academic performance.

In 2016, Almasi, N.G. et.al did a study on, the comparison of self-efficacy in ADHD and normal students and concluded that adolescents diagnosed with ADHD encounter notable hurdles within academic environments, primarily stemming from their struggles in social interactions, emotional regulation, and overall self-efficacy. (37) The current study revealed that students with attention deficit exhibit reduced emotional and academic self-efficacy. Their academic performance suffers due to lack of focus and an inability to effectively prioritize tasks. Therefore, the referenced study supports the findings of current research.

In 2015, M. Gambin et.al did a study on, the relationships of self-efficacy beliefs to executive functions, hyperactivity-impulsivity and inattention in school-aged children and concluded that children with higher levels of self-confidence in academic achievement and self-control tend to have fewer symptoms of ADHD. Conversely, children with more intense ADHD symptoms tend to have lower self-confidence in these areas compared to their peers. It's likely that children with ADHD symptoms face challenges in developing strong self-efficacy because they have fewer opportunities to experience success in learning, controlling their behavior, and meeting parental and teacher expectations. They also receive more negative feedback from teachers, parents, and peers regarding their behavior, skills, and achievements. Additionally, they may struggle to concentrate and learn from observing others. (38) This study supports the results of current research that students with attention deficit have low self-efficacy which means they have low-levels of self-confidence in achieving good academic results as compare to normal students without attention deficit.

In 2019, A. Jangmo et.al did a study on, the effect of attention-deficit/ hyperactivity disorder and its medication effect on school performance and concluded that ADHD significantly lowers school performance regardless of a student's family background. However, getting treatment for ADHD, like medication, can improve school performance. (39) So this study highlights the need to identify and treat ADHD early to help students do better in school. In this study, the influence of ADHD on academic outcomes aligns with the findings of the current study, while the effect of ADHD medication in enhancing academic performance contradicts the results of the current study. In 2020, V. Powell et.al did a study on the association between childhood ADHD and adolescent depression

and investigate the role of peer relationships and academic attainment. This study concludes that people diagnosed with ADHD often encounter challenges in academic settings due to their difficulty in maintaining focus over extended periods, managing impulses, regulating emotions, and adhering to conventional classroom expectations and regulations. In the previous research, academic attainment was assessed through GCSE Exam results (40), whereas the current study evaluates academic results based on students' previous class result percentages. The results of the previous study correspond with those of the current study in two respects. Firstly, both studies focus on the same sample population: adolescent students. Secondly, both studies indicate that students with ADHD exhibited poor academic performance in school.

In 2021, A. Dobrea et al. did a study on the measurement of variance of ADHD rating scale-IV across age, gender, clinical status, and informant and concluded that ADHD-RS-IV seem to be effective tools for evaluating ADHD issues in children, both in research settings and clinical contexts. This research affirms the accuracy of the structure of ADHD-RS-IV in a diverse national sample of Romanian children. (41) The previous study, which focused on Romanian children, aligns with the current study by utilizing the ADHD-RS-IV as a screening tool for ADHD symptoms. While the previous study employed the home and school versions of this scale, the current study administered the self-version of the scale to Pakistani students.

In 2019, A. Mehmood et al. did a study on, the effect of self-efficacy on academic performance at a higher-level of learning and concluded that there is a notable connection between students' self-efficacy and their academic performance, particularly in higher-level learning environments. Self-efficacy provides students with motivation, confidence, self-reliance, and encouragement, prompting them to complete daily homework and other educational tasks consistently. This, in turn, enhances students' chances of success in exams and contributes to achieving high scores. (42) The previous study, conducted in Pakistan, lends support to the present study, as both of which utilized identical academic self-efficacy questionnaire items to assess self-efficacy. Both studies demonstrated the significant impact of self-efficacy on students' academic performance. The findings of the current study revealed that students with high self-efficacy tend to achieve better grades and scores.

CONCLUSION

The study's findings demonstrate a statistically significant impact of attention deficit on both self-efficacy and academic performance. Specifically, students without attention deficit exhibit notably higher levels of self-efficacy and academic achievement compared to their peers with attention deficit. This underscores the importance of addressing attention deficit in educational settings to support students in developing stronger self-efficacy beliefs and achieving better academic outcomes. Additionally, these results emphasize the need for tailored interventions and support systems to assist students with attention deficit in overcoming academic challenges and enhancing their overall academic success.

LIMITATIONS

Following are the limitations of this study;

1. Relying solely on the ADHD-RS-IV for evaluating attention deficit might not encompass the complete range of ADHD symptoms experienced by adolescents. This limitation could affect the accuracy of assessing attention deficit.
2. The ADHD-RS-IV, available in both home and school versions, is widely used to evaluate ADHD symptoms across various settings, including clinical and non-clinical contexts. However, this study relied on the self-report version of the ADHD-RS-IV, which could be challenging due to potential recall bias arising from children's memory and the likelihood of students overestimating their symptoms of attention deficit.
3. The duration of the study might not allow for the thorough examination of the prolonged impacts of attention deficit on adolescents' self-efficacy across different aspects of life.

4. The study might not have lasted long enough to fully understand how attention deficit affects students' grades and how successful they are in reaching their goals.
5. The study's focus solely on secondary level students could restrict how widely the findings can be applied to other groups of people.
6. This study was conducted in just one school with a specific group of students i.e., secondary level, which could narrow the understanding of how attention deficit affects the self-efficacy and academic performance of children.

RECOMMENDATIONS

Future studies should be conducted while keeping following points in mind;

1. Incorporate objective measures, alongside the self-reported measures like ADHD-RS-IV questionnaire and SEQ-C questionnaire, to enhance the accuracy and reliability of attention-deficit and self-efficacy assessments.
2. Consider other factors that could affect how confident teenagers feel, such as various mental health issues apart from ADHD, and using additional scales to provide a more comprehensive evaluation.
3. The study should be extended to observe the long-term impact of attention deficit on academic performance.
4. Create educational initiatives focused on the positive effects of self-efficacy on academic results, with the goal of raising awareness among school students.
5. Design and implement intervention studies that promote self-efficacy among school students.
6. Encourage activities that emphasize attention skills in school schedules, making them compulsory for all students to participate.
7. Future studies can be conducted with larger sample size with long term follow up.

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