



# Issues and Diagnosis among ADHD Children in Learning: 'Bird's Eye View'

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## ARTICLE INFO

## ABSTRACT

The article provides a brief summary of the symptoms of attention deficit/hyperactivity disorder (ADHD) in children, as well as current clinical diagnosis measures. Although it is still believed that the disease is caused by a combination of inattention, as well as hyperactive-impulsive behaviour, concepts about attention deficit/hyperactivity disorder (ADHD) are increasingly emphasizing inadequate inhibition as well as impaired executive function (self-regulation) as a significant risk factor. According to research, there are shortcomings in the DSM-V's clinical diagnostic criteria that must be addressed. Academics, psychologists, and clinicians must be aware of these issues, as well as the adjustments that must be made when working with people to be neglected in the research studies that generated these requirements.

**Keywords:** ADHD Children, The diagnosis, Symptoms, The Diagnostic and Statistical Manual of Mental Disorders (DSM-V, 5th edition).

## Introduction

The diagnostic status of children with hyperactive, inattentive, and impulsive disruptive behaviours has fluctuated several times in recent decades, but the underlying nature of the disorder has changed little, if at all, since an overview almost 20 years ago (Swanson et al. 1998; Planczyk et al., 2014; & Bauermeister & Barkley, 2010). The diagnostic norms for ADHD (formerly described as attention deficit hyperactivity disorder) have recently amended to match the most recent research literature attesting to the disorder's salient aspects (Barkley, Spitzer & Costello, 1989; Du Paul, 1991). This collection of behavioral disorders is one of most ancient as well-studied disorders affecting children today. However, these children continue to be a mystery to the public in general, who have found it difficult to embrace the idea that their illness is a biologically associated developmental defect when nothing either externally looks like wrong with them. ADHD may be diagnosed when individuals exhibit the aforementioned features to a level that is highly disruptive for their chronological age group as sufficient to create deficiencies in critical daily tasks (APA, 1994). Their troublesome behavior is assumed to emerge early in life, generally during early childhood, and to persist throughout their development in a lot of instances. The goal of this page is to provide a brief overview of the disorder, clarify its diagnostic requirements, and identify numerous unresolved issues that could require to be discussed in future revisions to the existing diagnosis criteria. Because of the large number of scientific studies undertaken on attention-deficit/hyperactivity disorder (ADHD), this page can only provide a general overview.

## Diagnosis

### 1.1 The primary symptoms

It is vital to go over the disorder's diagnostic criteria. Simply expressed, these criteria describe what ADHD is along with isn't. The current formal diagnostics for ADHD are documented in the American Psychiatric Association's DSM-V (2013), which is widely used around the world. These criteria, with a few minor changes, are identical to those outlined in the DSM-IV (APA, 1994). The DSM criteria are similar, but not identical, to the illness categorization in the ICD-10 and WHO (International categorization of Diseases; World Health Organization, 2008).

Two unique behavioral features distinguish the distinct behavioral issues (symptoms) found in ADHD (Du Paul, 1991 & Lahey et al., 1994). These two features are defined as the descriptive characteristics of the condition in the fifth edition of the DSM (Table 1 & APA, 2013), so they are the diagnostic standards in the United States and, to a lesser extent, other regions of the world. These behavioural traits have been noticed in persons from many cultural and ethnic origins. ADHD is defined as attention deficit hyperactivity impulsivity that inhibits with normal functional progress. Inattention exhibits itself in several ways, such as mind wandering while performing a task, a lack of persistence, and disorganization. Excessive motor movement when not suitable, pacing, tapping, or talkativeness is all symptoms of hyperactivity. Making decisions or doing actions on the spur of the moment is referred to as impulsivity. It might also manifest as social intrusion or making crucial decisions without understanding the implications. It is crucial to emphasize that these behavioral patterns shouldn't be blamed on disobedience and a lack of comprehension (APA, 2013).

### 2.1.1 Inattention

Since attention is a complex thing (Misky, 1996; Barkley, 2003), signs of inattention are meaningless for diagnosis unless the sort of focused concentration that is being hampered is identified. It appears that ADHD is associated with difficulties paying attention to different tasks and activities, remembering and adhering to rules and instructions, or avoiding distracting while doing so. Children with ADHD frequently exhibit poor academic achievement, particularly in written language and mathematics (Fuchs et al., 2006 & Riccio et al., 2006). Impairment of this function has been connected with the disorder's inattention symptoms. As reported by Rossi et al. (2015), ADHD-PI individuals performed more difficult than developing normally controls on the Continuous Performance Test (CPT) on tests of focusing attention (omissions) as well as areas of cognitive function such as concentration, speed of processing, consistent focus, and prohibitive behaviour.

### 2.1.2 Hyperactive/impulsive behavior

Like attention, inhibitions are complicated, therefore children may develop a number of qualitatively different inhibitory disorders (Nigg, 2000 & Olson, 1999). Willcutt et al. (2012) discovered that cognitive inattentive symptoms are more significantly associated with academic achievement in ADHD hyperactive-impulsive symptoms. ADHD conquest difficulties involve voluntary or executive repression of proponent emotions, unlike impulsiveness, which can be motivated, such as attraction to accessible incentives (reward seeking) and excessive fear (Jt, 2001). Greven et al. (2014) found a genetic link between hyperactivity-impulsivity and academic achievement, possibly due to a shared lineage of inattentive and hyperactive traits. In this age group, some hyperactivity and impulsivity is developmentally appropriate, making it hard to distinguish between normal and abnormal behavior. Because they cannot be exposed to contextual forces like staying focused, inattention is harder to assess. Using several sources, children can be identified with inattentive and hyperactive/impulsive traits in varied combinations and severity. In late children and adolescents, hyperactive/impulsive ADHD symptoms decline over inattentive ones (Rohde et al., 2019).

**Table 1 DSM-V Criteria for ADHD**

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- A. Pervasive attention deficit hyperactivity/ impulsivity that disrupts work or development, as defined by (1) and/or (2).
1. Inattention, also known: Six (or more) from these indicators have persisted at least 6 months and are unrelated to their level of development, negatively impacting both social and academic activities.
    - (a) Exhibits poor attention to detail and makes mistakes in academics, work, and other activities.
    - (b) Has difficulty focusing on tasks or play activities.
    - (c) Does not always appear to listen if directly addressed.
  - (d) Demonstrates difficulty following directions and completing activities, such as losing attention and being easily distracted.
    - (e) Struggles with task with physical activity organization, such as adapting to changing activities, maintaining order, producing sloppy work, poor management, and missing deadlines.
    - (f) Avoids or dislikes tasks that need long-term focus, such as schoolwork and homework, as well as drafting reports, filling out forms, and reading lengthy documents.
    - (g) Misplaces items needed for duties or activities on a regular basis (e.g., school supplies, crayons, textbooks, tools, wallets, and buttons, paper, eyeglasses, mobile phones).
    - (h) Can be easily distracted by peripheral stimuli, including irrelevant concepts in older teens and adults.
    - (i) Is frequently forgetful in daily responsibilities (such as completing housework and running errands; for older adults and teens, this includes answering phones, billing, and remembering sessions).
  1. Hyperactivity / impulsiveness: Hyperactivity or impulsiveness: A total of six or more symptoms that persist for at least 6 months and have a negative impact on social, academic, and professional activities.
    - (a) Frequent fidgeting, tapping of hands and feet, and jumping in the seat.
    - (b) Excessive movement from one's seat, despite the expectation of sitting.
    - (c) The excessive running or climbing in unsafe situations.
    - (d) Frequently unable to relax or engage in leisurely activities peacefully.

- (e) Often "on the go," or acting to be "driven for a motor"
  - (f) Continuously talks.
  - (g) Frequently responds to questions before they are finished.
  - (h) Has difficulty awaiting for a turn
  - (i) Regularly disrupts other people's activities, such as games or activities, and may use others' property without permission. Adolescents and adults may also take over their peers' actions.
2. A number of inattention or hyperactive-impulsive symptoms existed before the age of 12.
  3. Symptoms of inattention or hyperactivity-impulsivity present in multiple settings (e.g., school, home, social situations, or activities).
  4. There is strong evidence indicate the symptoms negatively impact social, intellectual, and occupational functioning.
  5. The symptoms are not specific to schizophrenia and other psychotic conditions and cannot be explained by other mental illnesses (e.g., mood disorders, anxiety disorders, disruptive disorders, personality disorders, and alcohol or drug intoxication/withdrawal).

Indicate whether or not:

- 314.01 Combined presentation: If both Criterion A1 (inattention) and Criterion A2 (hyperactivity-impulsivity) were considered met within the last six months.
- 314.00 If the requirements A1 (inattention) matches the needs but Criteria A2 (hyperactivity-impulsivity) is not met within the last six months, this presentation is likely to be predominantly inattentive.
- 314.01 The presentation is predominantly energetic and impulsive. If Criteria A2 (hyperactivity-impulsivity) and Criteria A1 (inattention) were met within the last six months.

Indicate if:

In part remission: When all criteria were previously met, less than all of them have been maintained in the last six months, and symptoms continue to impair academic, social, and occupational functioning.

Specify the current level of severity

**Mild:** There are a few, if many, symptoms that are greater than what is required to make a diagnosis, including the symptoms, cause more than modest difficulties in social and occupational functioning

**Moderate:** Signs or functional impairment ranging from "mild" to "severe" exist.

**Severe:** There are many more symptoms than are needed for the diagnosis, multiple symptoms that are extremely severe, or the symptoms cause significant problems in social or occupational functioning.

**Note:** From American Psychiatric Association (2013). Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (Copyright © 2013).

## 1.2 Contextual and Situational factors

A variety of environmental and task-related factors influence the severity of ADHD symptoms. Children with ADHD do poorly later in the day's activity compared to earlier in the day (Dane et al. 2000); with higher difficult tasks requiring organizational tactics (Douglas, 1983); when constraints is needed (Luk, 1985); under rare amounts of stimulus (Antrop et al. 2000); in variables plans of right away in the activity (Carlson & Mann, 2002) in a while prevent periods previous to support the accessibility (Solanto et al. 2001) in a lack. Variability has been recorded in situations that are more macroscopic, in addition to the requirements that were defined before, which primarily pertain to the performance of tasks. For example, Children with ADHD are likely to display problematic behavior when it is necessary for them to be meticulous in tasks related to work (such as chores, schoolwork, etc.) or in situations that require behavioral restraint. This is especially true in settings that involve the scrutiny of others, such as churches, restaurants, or while their parents are on the phone. Even though children with ADHD more disruptive when their fathers are present than when they are not, it is generally accepted that they are far less problematic when their parents are around than in the majority of situations. ADHD symptoms have been found to vary in intensity across a variety of educational settings (DuPaul & Barkley, 1992). People with attention-deficit/hyperactivity disorder (ADHD) work hard once they find tasks that they enjoy, according to anecdotal evidence and some scientific study. This is consistent with current mental effort notions, which emphasize the importance of cost-benefit analysis throughout the process by which people assign resources to complete projects (Kurzban et al., 2013). In other words, the cost of completing a task is weighed against the expected value of the outcomes (Kurzban et al., 2013; Westbrook et al., 2013; Botvinick & Braver, 2015; Massar et al., 2016).

## 2.3 Associated cognitive deficits

Although they are not exclusive to ADHD, insufficiencies in language, physical, and moral development are common. Low frustration tolerance, impatience, and mood lability are some of the symptoms of this condition. It is typical for academic or vocational achievement to be impacted when there are no specific learning challenges present. Individuals with ADHD may exhibit cognitive abnormalities when tested on assessments of close attention, executive function, nonetheless, these tests are insufficiently sensitive or reliable to serve as diagnostic markers. According to the APA (2013). Many other cognitive functions are often lacking in children with ADHD. Among these are problems with: motor sequencing, gross as well as skilled motor coordination, and physical fitness (Lelong et al., 2021; Faran et al., 2020; Arumugam & Parasher, 2018;

Altepeter & Breen, 1992; Harvey & Reid, 1997); color naming speed (Whipple & Nelson, 2016; Tannock et al., 2000); Working memory, both verbal and nonverbal, and mental calculation (Kofler et al., 2020; Holmes et al., 2014); anticipation, planning; aggressive communication and verbal fluency (Hawkins et al., 2016) Internalizations of self-motivated speech (Morsink et al., 2022); effort allocation, changing, applying, and self-monitoring organizational techniques (Alsalamh, 2017; Durnd et al., 2020; Lesse, 2016); adhering to restrictive instructions (Marticella et al., 2022; Loe & Feldman, 2007); and self-regulation of emotion (Shaw et al., 2015). Additionally, challenges with emotional control may be more severe in ADHD children who suffer from ODD (Harvey et al., 2016; Frick & Nigg, 2012).

Multiple studies have also discovered a link between ADHD and younger children or poor development of morals (Singh et al., 2015). These seemingly disparate abilities have been classed as 'the executive functions' in neuropsychology (Mueller & Tomblin, 2012) or 'metacognition' in developmental psychology. A lack of awareness about metacognition in ADHD persons may make it difficult to identify, monitor, and investigate these concerns. As a result, problem-solving, adaptive abilities, and social competences may suffer in the school systems and home (Pezzica et al., 2018; Basile et al., 2018; Butzbach et al., 2021). These youngsters also have problems in their parietal to temporal lobes that are linked to their frontal lobes, which are critical for focus abilities and could be the source of their concentration troubles (Rubia, 2017). The frontal cortex, such as the frontal lobes, appears to influence all of them (Kimberg et al., 1997).

According to the findings of plenty of research (Girotti et al., 2018; Barnes et al., 2011; Menezes et al., 2015; Leh et al., 2010; Logue & Gould 2014; Robbins & Arnsten 2009), executive functioning is made up of a number of top-down cognitive processes that are required for adaptive behaviour on an ongoing basis. These procedures entail having to pay focused attention, to concentrate, prepare a plan of actions, adjust to unanticipated events, and avoid participating in acts of impulse that is inappropriate for the situation. By putting an end to activities that are based on instinct, executive approaches make it simpler to carry out actions that are geared toward achieving a goal and takes deliberate steps to complete a task. Goal-oriented processes are able to initiate and terminate actions, monitor and change behavior as necessary, and plan future behavior when they are presented with novel events and scenarios. Experiments can be used to illustrate executive functions such as recall, mental set shifting, inhibitory control, and more sophisticated thinking processes such as delayed satisfaction of self-regulation (Miyake et al., 2000). These are just some examples of how executive functions can be demonstrated. Neuroimaging studies have found a link between executive function, most frequently referred to the memory, and this part of the brain. The frontal lobe is a part of the cognitive system that is responsible for synchronizing action and cognition with regard to internal goals. According to Barkley (1997) and Barkley (2001), executive functions are cognitive processes that contribute to the process of self-regulation. The current efforts to develop a theory of ADHD have indicated that inattention is the characteristic of this disorder may have been brought on by deficiencies in executive functioning, particularly in memory and concentration (Barkley, 1997).

### 1.3 Issues with diagnostic criteria

The most current requirements for diagnosing ADHD are shown in Table 1 (American Psychological Association, 2013). When it comes to the history of medical diagnosis, the diagnostic criteria for this ailment are among the most stringent and meticulously derived requirements ever. The DSM (Diagnostic and Statistical Manual of Mental Disorders) requirements while scientifically sound, contain a number of difficulties that must be addressed in clinical practice and are expected to be remedied in future editions:

According to the data, the most frequent form of attention-deficit/hyperactivity disorder (ADHD) is inattentive (ADHD-PI). This kind of ADHD affects a very wide group of children, some of whom have a qualitatively distinct attention and mental processing impairment (Milich et al., 2001). This particular subset is characterized by a sluggish way of thinking in addition to selective attention deficiencies, a lower comorbidity at oppositional and conduct disorder, a more passive social relationship style, the potential for retrieval of memory issues, and a distinct, more normal developmental trajectory. Specialists must to be aware of the existence of this subgroup and acknowledge that the knowledge that is currently available regarding the nature, causes, and treatment of attention-deficit/hyperactivity disorder (ADHD) might not be applicable to this particular group of children (Barkley, 2003).

❖ It is possible that SCT could explain diagnostic heterogeneity in ADHD-PI patients, which is one justification for the rising interest on this procedure. As was said before, those who have been diagnosed with ADHD-PI are classified into one of the two diagnostic groups that are as follows: (1) individuals who support six or more inattentive items but fall just short of the diagnostic threshold in the hyperactive-impulsive symptom cluster, and hence reflect merely sub threshold of the diagnostic criteria (Barkley, 2015). According to Hart et al. (1995), the behavioral components of these lists, particularly those indicating hyperactivity, experience a significant decline between the ages of 4 and 16 years. The application of a similar threshold through such a declining developmental slope may result in a situation in which a higher percentage of young preschool-aged children (ages 2-3 years) are incorrectly diagnosed as having attention-deficit/hyperactivity disorder (ADHD) (false positives), while a lower percentage of adults adhere to the requirements (false negatives) (Barkley, 2002). Huang et al. (2017) also found that, in contrast to the tendency for impulsivity and hyper symptoms to disappear throughout the early years of childhood, this inattention symptom persisted



across time in individuals who had attention-deficit/hyperactivity disorder (ADHD). This finding is in line with the temporal stability that was previously identified for the inattention symptom. Because of this, the ADHD-PI presentation was responsible for up to 67.43% of all instances of ADHD that were diagnosed in students attending elementary schools.

❖ Learning about ADHD as a stable disorder raises a related conceptual difficulty in which symptoms remain largely constant regardless of age, as opposed to a developmental illness, which means a delay in the rate at which a normal feature develops. Disorders are identified in the latter situation by comparing to peers of the same age, something the DSM doesn't do. According to available research, ADHD is most probably a dimensional illness (Schnoll, 2010) that represents a severe case of or a delay in a normal trait(s), and hence is similar to other types of developmental disorders involving mental retardation. It must be identified as a developmental relative impairment, such as being in the 93rd or 98th % in terms of the severity of signs for age. The majority of research on imitation has focused on symptom-related issues, particularly self-regulation of behavior and emotions. Self-regulation as a skill entails self-monitoring, goal planning, reflective thinking, choice-making, self-evaluation, and emotion control as a result of behavioral change (Stefanidi et.al, 2023 & Ankrah et. al, 2022). As a result, self-regulation is critical for children of ADHD. Ahmadpour et al. (2023) identified a shortage of digital resources that enable learning about how to enhance emotional self-regulation in children with major emotional behavior disorders, which includes reflection and behavioral change.

❖ The contents of the component set may not be appropriate for all ages. The inattention items may have a broader developmental application throughout school-age ranges of childhood as well as into adolescent and young adulthood. Those for hyperactive-impulsive behavior, on the other hand, appear to be considerably more applicable to young children and less applicable to older teens and adults (e.g. climbs on things, can't play quietly, etc.).

❖ ADHD is diagnosed more frequently in men related to women in the overall population, with a rate of around 2;1 from children and 1;6;1 among adults. Females exist more likely than males with primarily inattentive characteristics (APA, 2013). The lower rate in females may be due to a higher attraction towards ADHD in boys vs. girls, Gaub & Carlson (1997), an expression of various genes for ADHD in boys and girls (Derke et al, 2007), or the need of a greater threshold in girls in the level of attraction to manifest ADHD as outlined through the polygenic many beginning model (Rhee & Waldman, 2004). ⚠ Parents may notice more indicators in guys who exhibit disruptive hyperactive-impulsive tendencies. According to the Twins reports, there is a discussed genetic risk between ADHD and difficulties with internalization (additive genetic correlation ( $r_A$ ) = .45), depression ( $r_A$  = .67-.77), affective problems ( $r_A$  = .34-.48), and anxiety ( $r_A$  = .45-.58) (Chen et al., 2016; Martin et al, 2018; Michelini, Eley, Gregory, & McAdams, 2015; Rydell, Taylor, & Larsson, 2017). Although compared to ADHD, anxiety and depression is more common in women (Aske et al., 2021).

❖ These findings imply that ADHD susceptibility to genetic factors manifests differently in males and females in people in general, such as worry or anger in females. Indeed, multiple family studies have found that first-degree relatives of affected females are more likely to have ADHD than family members of affected men (Martin et al., 2017; Taylor et al., 2016). This is indirect proof suggesting a larger genetic risk burden in females of ADHD and their close relatives. The data, however, is mixed, with two studies revealing no change (Chen et al., 2016; Faraone, 2000). Furthermore, while two genetic studies (one clinical and another population-based) discovered a larger responsibilities of common risk variations in females at ADHD (Hamshere et al., 2013; Martin et al., 2014), a larger clinical ADHD study found no gender difference with ADHD common variant burden (Martin et al., 2017).

❖ The age at which ADHD symptoms appear (7 years) is unjustifiable on historical, scientific, or pragmatic grounds (Kieling et.al, 210). There are no qualitative differences between individuals who fit the criteria (early onset) and those who don't (late onset). An diagnosis before the age of 6 years may result in progressively more severe symptoms, as well as more issues with reading & school performance in general (Froiland & Davison, 2016), although this is a matter of degree rather than kind.

❖ There could be a young age cutoff for making the diagnostic; below that age, no diagnosis is appropriate. This is significant since tests on preschool children has revealed that a distinct dimension of hyperactive-impulsive behavior from hostility or rebellious behavior does not appear to arise until around the age of three (Biedermen et .al, 2010 & Cambell, 2011). Below the age, these behaviors congregate to produce what is known as behavioral immaturity, externalizing difficulties, or an uncontrolled pattern of behavior. ADHD symptoms can be difficult to identify from other early behavioural disorders before the age of three, thus limiting diagnostic uses.

❖ The six-month timeframe may not be sufficient. In this particular time range for the manifestation of symptoms, there is no evidence to support it. If folks are to consider this condition to be a developmental handicap rather than a transient, normal developmental stage, it is undoubtedly essential that symptoms be somewhat persistent. This is because the condition is a developmental handicap. The behavior problems were likely to be highly persistent and predictive of continuing into the school-age range in cases where they continued for at least twelve months or beyond the age of four years. It is possible that the duration should be established at twelve months and twenty-four months or more (Tandon & Luby, 2011; Dworkin, 2015).

❖ The DSM has introduced an innovative too controversial criterion for determining symptom pervasiveness known as the criterion of symptoms being present in at least two of the three circumstances. In order to arrive at a diagnosis of the symptoms, the DSM requires that two of the three sources of data—the parent, the teacher,

and the employer—must reach a consensus. Setting and information sources are confounded as a result of this. According to Achenbach et al. (1987), the amount of consistency between parents and instructors on any element of child behavior is considered to be low. The level of consistency typically ranges between 0.30 and 0.50. The extent to which parents and teachers would reach a consensus on a child's level of attention-deficit/hyperactivity disorder (ADHD) symptoms and, consequently, whether or not the child has the condition in that environment is limited as a result of this. Discrepancies of this nature between sources unquestionably suggest that the child's conduct is different as a consequence of the true variances in the requirements that are present in these settings. On the other hand, they also represent differences in the perspectives and evaluations of individuals. When such an agreement is insisted upon, it is possible that the diagnosis may be applied in an unjust manner to certain children. This is because of the widely known inequalities that exist between the perspectives of parents and teachers. Based on the data that a parent-reported diagnosis will result in a teacher-reported diagnosis ninety percent of the time (Biderman et al., 1990), it is hopeful that reports from parents can be used for diagnostic purposes for the time being. By combining the accounts of parents and teachers, it is possible to achieve the most accurate discrimination of children with attention-deficit/hyperactivity disorder (ADHD) who come from other groups. This is accomplished by counting the number of distinct symptoms that are supported by both sources of data (Crystal et al., 2001 & Mitsis et al., 2000). In general, our findings suggest that using the criteria for diagnosing attention-deficit/hyperactivity disorder (ADHD) at the age of three years may appear to be too early, particularly if parents and teachers are required to reach a consensus, as was suggested by a previous study that involved young children (Harvey et al., 2015).

### **2.5 A list of deficiencies that are considered to be associated with ADHD.**

#### Cognitive domains

- ❖ Mild intellectual deficiencies (7-10 points).
- ❖ Deficient academic achievement skills (10-30 average score points).
- ❖ Problems with learning involve comprehension (8-39%), vocabulary (12-26%), math (12-33), and written communication (common but unstudied).
- ❖ Inadequate assessment and replication of time, and additionally a bad sense of time
- ❖ Both verbal and nonverbal memory function were lowered.
- ❖ Impaired capacity to plan
- ❖ Reduced error sensitivity
- ❖ A decrease in a goal-oriented behavioral inventiveness

#### The language

- ❖ Language delay (e.g. to 35%, though not always)
- ❖ Speech difficulties (10-54%)
- ❖ Excessive conversational speaking, aggressive speech
- ❖ Ineffective idea expression and ineffective organization
- ❖ Impaired ability to solve problems verbally
- ❖ co-existing central auditory processing abnormalities
- ❖ Poorly controlled behavior
- ❖ Internalization of speech delayed (30% delay)
- ❖ Moral reasoning growth has slowed.
- ❖ Adaptive functioning is 10-30 points below normal.

#### Motor system growth is slow.

- ❖ Motor coordination can be delayed by up to 52%.
- ❖ Increased 'soft' neural signals for movement coordination and overflow motions.
- ❖ Slow gross motor movements.

#### The Emotions

- ❖ Symptoms may include poor emotion regulation
- ❖ high frustration tolerance, under-reactive stimulus and school enactment
- ❖ Common classroom behaviour issues
- ❖ Common underachievement in school.
- ❖ Academic instruction (up to 56%)
- ❖ Retake a test with a high score (30% or higher)
- ❖ 30-40% is enrolled in a number of special education programs.
- ❖ Suspension from school (up to 46%)
- ❖ Dismissal from school (10-20%) and inability to finish high school (10-35%).

#### Task performance

- ❖ Insufficient exertion/stimulus perseverance
- ❖ Increased response variability. Postponing rewards leads to decreased performance and output.
- ❖ More problems arise when intervals are induced into the assignment and their duration rises.
- ❖ Switching from continuous into intermittent reinforcement results in decreased performance.
- ❖ Non-contingent consequences cause increased disturbance at work.

#### Medical/health issues

- ❖ Increased propensity at unintentional mishaps (up to 57%).
- ❖ Sleeping difficulties (up to 30-60%)
- ❖ Increased driving hazards, such as automobile accidents or speeding tickets
- ❖ An increased risk of smoking, addiction to nicotine, or misuse
- ❖ Alcohol use, dependency, or abuse is more likely.

Lastly, the DSM criteria provide little advice to doctors in differentiating the condition from other psychiatric diseases with which it frequently co-occurs. ADHD is commonly related with a wide range of intellectual, mental, academic, emotional, and social problems. Some of these are directly caused by the condition, while others, such as co-morbid behavioural disorders and learning impairments, are related to various primary issues associated with ADHD at a higher rate than would be expected by chance (population base rates).

## 2.6 Conclusion

Many of the problems with the present standards for diagnosing ADHD should be fixed in later versions of the DSM. The current norms for the illness, on the other hand, are among the most stringent that have ever been developed, and they constitute a significant improvement above the status that was prior to 1980. By paying care to the challenges that have been brought forth above, the DSM criteria may become more rigorous, legitimate, and useful. In the meanwhile, academics, teachers, and psychologists need to be aware of these concerns and study the possibility of revising the criteria that are currently used by the DSM while also taking into account the unique demographics and situations that are being discussed. The DSM IV categorization paradigm has been retained within it for the most part. Reclassifications have been made for a number of clinical illnesses. The clinical condition dimensions of each individual patient are added. It is necessary for folks to obtain an understanding of them and incorporate them into our work before we can engage in meaningful conversations regarding their significance.

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