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## Autism Spectrum Disorder

Autism Spectrum Disorder (ASD) is an umbrella term for a group of brain development disorders that are characterized by difficulties in social interaction, difficulties in verbal and nonverbal communication, and repetitive behaviors. Since 2013, previously distinctive subtypes including autistic disorder, childhood disintegrative disorder, pervasive developmental disorder-not otherwise specified (PDD-NOS), and Asperger syndrome have all been folded into the ASD diagnosis. ASD is viewed as a continuum, with some individuals presenting a mild form of ASD and others having more severe symptoms. The causes of ASD remains unknown, but there are indications that it is caused by a mix of genetic and environmental factors affecting early brain development.

### Signs of Autism Spectrum Disorder

Children with ASD can begin to exhibit signs of the disorder within the first six months after being born, with other indications presenting through age two. For an individual to have ASD, he or she must show symptoms from early childhood even if those symptoms are not recognized until later in life. Typical early signs of ASD include:

- No big smiles or other warm, joyful expressions by six months or thereafter.
- No back-and-forth sharing of sounds, smiles or other facial expressions by nine months.
- No babbling by 12 months.
- No back-and-forth gestures such as pointing, showing, reaching or waving by 12 months.
- No words by 16 months.
- No meaningful, two-word phrases (not including imitating or repeating) by 24 months.

ASD is primarily characterized by problems communicating, difficulty with social interactions, and repetitive behavior. Symptoms include:

#### *Problems Communicating:*

- Significant language delays as children.
- Difficulty sustaining conversations.
- Difficulty with the “give-and-take” of conversations.

#### *Difficulty with Social Interactions:*

- Difficulty interpreting social cues, such as what others are thinking and feeling.
- Inability to understand the meaning of nonverbal expressions such as shrugging shoulders or grimacing.

- Difficulty seeing things from another's perspective and predicting another's actions.
- Difficulty regulating emotions.

*Repetitive Behavior:*

- Tendency to engage in a restricted (i.e. limited) range of activities.
- Unusual repetitive behaviors, such as hand-flapping, rocking, jumping and twirling, arranging and rearranging objects, and repeating sounds, words, or phrases.
- Need for strict consistency in the environment and daily routine. Preoccupations or obsessions with sometimes unusual objects, or depth of knowledge about topics, such as science or mathematics.

### **How Autism Spectrum Disorder Might Impact Behavior**

ASD can lead to significant social challenges in daily life. The difficulty that ASD causes in interacting with other individuals may manifest through the following behavioral patterns:

- An inability to quickly process and respond to requests, commands, or questions.
- Poor listening skills that make it seem that the individual is uninterested in what others are saying.
- An inability to deduce what others are thinking and why they are thinking it.
- A tendency to make statements that seem tactless or brutally honest.
- Difficulty understanding slang terms, innuendo, colloquialisms, figures of speech, or jokes.
- Difficulty interpreting communications such as rolling of eyes, raised eyebrows, and other non-verbal signals of frustration or disbelief.
- Preoccupations with a specific person, object, or topic.
- Difficulties understanding the passage of time, including distinguishing between what was known at a specific time in the past and what is known now.
- Repetitive behavior.
- Sensory overload that causes the individual to not be able to take in more information or understand what is said; this may make the individual attempt to leave the room.

Individuals with ASD may commit offenses without even realizing they have done so because of difficulty picking up on social cues and interacting with others. Thus, individuals with ASD may make threatening statements, stalk others, or have verbal and physical outbursts without realizing the social and legal implications.

When questioned by investigators or in court, ASD offenders may have trouble maintaining eye contact, or may insist on changing the subject to another topic of their choice, which others can wrongly interpret as an attempt to be evasive or misleading. Interrogation techniques involving trickery or deceit can confuse an individual with ASD and lead to misleading statements or even false confessions.

There has been little research on the impact of ASD on a person's likelihood to become involved with the criminal justice system. However, ASD can be accompanied by other disabilities such as learning disabilities or attention-deficit/hyperactivity disorder (ADHD), which can increase the likelihood of criminal justice involvement.

## Resources for Additional Information

- Asperger/Autism Network: <http://www.aane.org>
- Autism Speaks: <https://www.autismspeaks.org>
- The Centers for Disease Control and Prevention: <http://www.cdc.gov/ncbddd/autism/hcp-dsm.html>
- Autistic Self Advocacy Network: <http://autisticadvocacy.org/>
- Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), American Psychiatric Association, “Autism Spectrum Disorder,” p.50

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## **Bipolar Disorder**

Bipolar Disorder is a chronic mental illness that causes unusual shifts in mood, energy, activity levels, and the ability to carry out day-to-day tasks. The disorder is characterized by notable changes in mood and energy that range from periods of extremely “up,” elated, and energized behavior (known as manic episodes) to very sad, “down,” or hopeless periods (known as depressive episodes).

There are four types of bipolar disorder—Bipolar I, Bipolar II, Cyclothymic Disorder, and Other Specific and Unspecified Bipolar and Related Disorders—that are categorized based on how the periods of mania and depression present. Bipolar I can be the most severe, with manic episodes that last at least seven days (but can last much longer) or are so severe as to require hospitalization. The cause of bipolar disorder is unknown, although it is likely related to brain structure and genetic factors. The disorder is typically considered treatable through therapy, medication, and other treatments, although it is not ‘curable’ and symptoms of the disorder will likely remain even while an individual is medicated.

### **Signs of Bipolar Disorder**

People with bipolar disorder have periods of intense emotion, changes in sleep patterns and activity levels, and unusual behaviors. The signs of bipolar disorder vary based on whether an individual has a manic or depressive episode.

#### *Manic Episode Symptoms:*

- Feeling “up,” “high,” or elated.
- Increased energy and activity levels.
- Feeling “jumpy” or “wired.”
- Trouble sleeping or decreased need for sleep (e.g. feels rested after only 3 hours of sleep).
- Increase in goal directed activity (either socially, sexually, or at work or school) or psychomotor agitation (i.e. purposeless, non-goal directed activity).
- Speaking rapidly about a variety of topics.
- Being agitated, irritable, or “touchy.”
- Distractibility (i.e. attention too easily drawn to unimportant or irrelevant external stimuli).
- Feeling of being able to do many things at once.
- Risky behavior, such as spending large sums of money or gambling.
- Grandiose thoughts and an inflated sense of self-importance.

### *Depressive Episode Symptoms:*

- Feeling sad, down, empty, or hopeless.
- Depressed mood most of the day, nearly every day.
- Fatigue or loss of energy nearly every day.
- Decreased activity levels.
- Trouble sleeping or sleeping too much.
- Inability to enjoy anything.
- Feeling worried and empty.
- Feelings of worthlessness or excessive or inappropriate guilt.
- Difficulty remembering and concentrating.
- Eating too much or too little.
- Recurrent thoughts of death or suicide, or a suicide attempt, or a specific plan for committing suicide.

### **How Bipolar Disorder Might Impact Behavior**

Alternating between manic and depressive states can impact every aspect of life for a person with bipolar disorder. For example, it can lead to:

- Damaged interpersonal relationships.
- Poor performance at work or school.
- Impulsive decision-making leading to consequences in both financial and legal affairs.
- Risky behavior that otherwise seems out of character.
- Psychomotor agitation, such as pacing, fidgeting, and an inability to sit still.
- Abuse of drugs or alcohol, leading to a co-occurring substance use disorder.
- Self-harming behavior and suicide.

Research has shown that individuals with bipolar disorder face higher arrest and incarceration rates, due in part to the impulsive behavior that accompanies a manic state. When an individual is acting erratic in public because he or she is in a manic state and acting impulsively with impaired judgment, law enforcement officers may be more likely to become involved with the individual. Moreover, either as a result of this impulsive behavior or to help self-regulate a depressive state, individuals with bipolar disorder are at a heightened risk of a co-occurring substance use disorder, which also increases the chance of becoming involved with the criminal justice system.

### **Resources for More Information**

- Depression and Bipolar Support Alliance: [www.dbsalliance.org](http://www.dbsalliance.org)
- Juvenile Bipolar Research Foundation: <http://www.jbrf.org/diagnosis-by-the-dsm/>
- National Institute of Mental Health: <https://www.nimh.nih.gov/health/topics/bipolar-disorder/index.shtml>
- Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, American Psychiatric Association, "Bipolar and Related Disorders," p.123.

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## **Borderline Intellectual Functioning**

Borderline Intellectual Functioning (BIF) is not a psychiatric disorder, but rather a description of people who function between average cognitive levels and Intellectual Disability (ID). Although persons with BIF may function at a high-enough level not to be diagnosed with an intellectual disability, they nevertheless score in a low intelligence quotient (IQ) range and may experience significant challenges as a result. BIF may be caused by genetic factors or maternal complications during pregnancy, but can also result from childhood neglect or exposure to toxins such as lead. Individuals with BIF face increased risks of physical health problems, psychiatric disorders, and substance abuse. Low intellectual functioning can seriously threaten both children and adults' ability to succeed in daily life, potentially leading to poverty and other significant stressors.

Although as much as 13.6% of the population may qualify as having borderline intellectual functioning, the condition has a low recognition rate. People with BIF may try to mask cognitive challenges with an appearance of normalcy, and in any event may not qualify for public services without a diagnosis of ID. As a result, people with BIF are an under-recognized and vulnerable group that faces increased obstacles and risks.

### **Signs of Borderline Intellectual Functioning**

- Decreased intellectual functioning in areas such as reasoning, problem solving, planning, abstract thinking, judgment, academic learning, and learning from experience.
- Difficulty adapting to changes or learning new skills.
- Difficulty achieving independent living, executing daily life activities, and participating with others in social situations.
- Difficulty managing emotions and aggression, with moods swings and low frustration tolerance.
- Naiveté, gullibility, or poor common sense.
- Social inappropriateness.
- Poor ability to concentrate and slow response time. General disorganization.

### **How BIF Might Impact Behavior**

Persons with BIF frequently struggle to succeed in school as children and maintain employment as adults. Adults may struggle in workplaces where they receive no accommodations for challenges in concentrating, following complex instructions, multitasking, and exercising independent judgment. Individuals with BIF are more likely to succeed when supported and given concrete, predictable tasks.

Because individuals with borderline intellectual functioning face many challenges yet also receive little recognition and few services, many experience depression, anxiety, and low self-esteem. Persons with BIF may receive ADHD or learning disorder diagnoses in partial recognition of their symptoms, yet these diagnoses do not fully capture the impact of borderline intellectual functioning in many realms of life.

Some research has demonstrated correlations between low IQ levels and crime; however, any related conclusions are complicated and limited by the many sociological factors that contribute to why individuals commit crime. Criminal justice advocates have argued that cognitive impairment should be a significant mitigating factor in conviction and sentencing decisions, as persons with reduced intellectual functioning may have reduced understanding of and culpability for their actions in certain circumstances. Furthermore, persons with BIF have been shown to be vulnerable to exploitation in criminal proceedings, possibly manifesting in outcomes such as in false confessions or unwise plea agreements.

### **Recent Developments**

Several changes were made to the definition of Borderline Intellectual Functioning in the DSM-5, the most significant of which was the removal of the specific IQ bracket from 71-84. There is now no specific IQ range attached to the condition: BIF is defined as when an individual's reduced intellectual functioning is the focus of clinical attention or has an impact on the individual's treatment or prognosis.

Modern research and treatment programs have revealed the importance of early intervention in improving outcomes for children experiencing BIF. However, children with BIF are less likely to be identified at a young age than those diagnosed with an intellectual disability, and these individuals' struggles may be attributed to lack of motivation or effort. These children's difficulties may become more apparent in a school setting, but many individuals with BIF may still not receive critical interventions if they are not diagnosed with an intellectual disability.

The connection between lead poisoning in children and low intellectual functioning has been the subject of recent research. Throughout the twentieth century, many American children, especially those of low socioeconomic status, were frequently exposed to lead, with many experiencing poisoning and reduced intellectual functioning as a result. The epidemic proportions of this problem were not well understood until the late 1960s and 1970s. Although the law and housing conditions have since improved, many older persons experienced harmful lead exposure, and the problem persists in American communities with high rates of poverty and environmental pollution potentially leading to decreased intellectual functioning.

### **Resources for More Information**

- Intellectual Disability Rights Service,  
[http://www.idrs.org.au/s32/\\_guide/p040\\_2\\_2\\_DiagnosisTerms.php#.V6S4yrqrK70](http://www.idrs.org.au/s32/_guide/p040_2_2_DiagnosisTerms.php#.V6S4yrqrK70)
- On the Mitigating Nature of Intellectual Disability in the Offender with Developmental Disability, <http://thenadd.org/modal/bulletins/v8n1a2~.htm>
- People with Intellectual Disability in the Criminal Justice System,  
<http://www.thearc.org/what-we-do/resources/fact-sheets/criminal-justice>

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## Complex Trauma

Complex trauma describes how an individual's exposure to multiple or prolonged traumatic events during childhood impacts their development and behavior. Complex trauma is also referred to as complex posttraumatic stress disorder (PTSD), but the symptoms that an individual with complex trauma exhibits may differ from those required for a diagnosis of PTSD. For example, an individual with complex trauma may not experience the persistent re-experience of symptoms (e.g. flashbacks or nightmares) that a person with PTSD would experience. Nevertheless, complex trauma has a similar impact on a person's thoughts, mood, and behavior.

Unlike PTSD, complex trauma is not a disorder listed in the Diagnostic and Statistical Manual of Mental Disorders (DSM). There was an effort made to include it as a disorder in the DSM-5, which was published in 2013, but the authors of the DSM instead only tweaked the criteria of PTSD and noted that the "clinical presentation of PTSD varies." Although complex trauma does not explicitly appear in the DSM, it acknowledges that individuals may exhibit trauma-related symptoms that are distinct from the criteria for PTSD. The DSM now acknowledges that "many individuals who have been exposed to a traumatic or stressful event exhibit a phenotype in which, rather than anxiety- or fear-based symptoms, the most prominent clinical characteristics are anhedonic and dysphoric symptoms, externalizing angry and aggressive symptoms, or dissociative symptoms." In other words, individuals who have experienced trauma tend to find little or no joy in activities they should otherwise enjoy, instead feeling indifference. These individuals may also feel abnormally aggressive, or detached and uninterested in what is going on around them.

### Signs of Complex Trauma

Complex trauma is characterized by experiencing traumatic events as an adult or adolescent, or experiencing Adverse Childhood Experiences (ACEs), such as physical or sexual abuse, witnessing domestic or community violence, separation from family members, or revictimization. To qualify as an "ACE" factor, the experiences must be: a) chronic, b) beginning in early childhood; and, c) occurring within the child's primary caregiving system and/or social environment.

There are a variety of symptoms that suggest an individual has complex trauma, including:

#### *Attachment and Relationships:*

- Relationship problems with family members, adults, and peers.
- Challenges with attachment to and separation from caregivers.
- Problems with boundaries.
- Distrust and suspiciousness.
- Social isolation.
- Difficulty attuning to others and relating to their perspectives.



*Behavior:*

- Difficulty with impulse control.
- Risky behavior.
- Self-destructive behavior.
- Sleep disturbances.
- Eating disturbances.
- Substance abuse.
- Oppositional behavior (more frequently losing one's temper, arguing with others, refusing to comply with rules, annoying others, or blaming others than is typical for others of similar age or developmental level).
- Difficulty complying with rules or respecting authority.
- Reenacting traumatic behavior (e.g., abusing others after having been abused, engaging in self-injurious behaviors such drug or alcohol abuse or binge eating after having experienced abuse).

*Dissociation:*

- Disconnection between thoughts, emotions, and/or perceptions.
- Loss of memory for the traumatic event.
- Sense of being detached from one's body and/or experiences.
- Shifts in consciousness (extreme changes in behavior or among aspects of one's personality).

*Emotional Response:*

- Difficulty with emotional self-regulation (e.g., angry outbursts, crying, accusing others, and aggressive or passive-aggressive behaviors).
- Difficulty labeling and expressing feelings.
- Difficulty communicating wishes and needs.
- Internalizing symptoms such as anxiety and depression (including through social withdrawal, experiencing unexplained physical symptoms, or engaging in suicidal thoughts or behaviors).

*Physical Health:*

- Sensorimotor developmental problems (problems producing developmentally appropriate movements in response to sensory stimuli).
- Problems with coordination and balance.
- Tendency to describe psychological distress as physical symptoms (somatization).
- Increased medical problems across a broad range.
- Developmental delays and/or regressive behaviors.

*Self-Concept & Future Orientation:*

- Losing a predictable sense of self (e.g., believing you are unworthy of respect or happiness; losing one's faith in ethical or religious norms, or in the order of the world; questioning the trustworthiness of friends, family, and others in your community).
- Disturbances of body image.
- Poor self-esteem.
- Shame and guilt.
- Negative expectations for the future.

### *Thinking and Learning:*

- Difficulty with executive functioning and attention.
- Lack of sustained curiosity.
- Challenges in processing information.
- Problems focusing on and completing tasks.
- Difficulties with planning and problem-solving.
- Learning difficulties.
- Challenges with language development.

### **How Complex Trauma Might Impact Behavior**

Because complex trauma can manifest in a variety of different ways, it can have various effects on behavior. However, there are some common behaviors that could impact an individual's interaction with the criminal justice system. An individual with complex trauma may be easily triggered or "set off," and is also more likely to react intensely to difficult situations. Complex trauma can also affect a person's impulse control, making a person behave in ways that appear unpredictable, oppositional, violent, and extreme. Individuals with complex trauma are more likely to engage in high-risk behaviors such as self-harm, unsafe sexual practices, and excessive risk-taking. An individual who felt powerless as a child or experienced abuse may react defensively and aggressively to the perception of being blamed or attacked—although the opposite can also be true, where an individual is abnormally compliant to the wishes and desires of others.

Individuals with complex trauma are more likely to have other diagnosable disorders including depression, anxiety, eating disorders, conduct disorders, learning and attention disorders like attention-deficit/hyperactivity disorder, or PTSD. Thus, complex trauma can lead to a variety of symptoms and behaviors that manifest differently in each individual.

### **Resources for Additional Information**

- Centers for Disease Control and Prevention: [https://www.cdc.gov/violenceprevention/acestudy/about\\_ace.html](https://www.cdc.gov/violenceprevention/acestudy/about_ace.html)
- Georgetown University Center for Early Childhood Mental Health Consultation: [http://www.ecmhc.org/tutorials/trauma/mod1\\_2.html](http://www.ecmhc.org/tutorials/trauma/mod1_2.html)
- National Child Traumatic Stress Network: <http://www.nctsn.org/trauma-types/complex-trauma>

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## Epilepsy

Epilepsy is a neurological disease characterized by chronic seizures, or sudden surges of electrical activity in the brain that can temporarily affect how a person appears or acts. Epilepsy affects people of all ages, and seizures can range from short and mild to serious and prolonged. The cause of most epilepsy isn't known, although it has been linked in some cases to genetic mutations or injuries such as brain trauma and stroke. To diagnose epilepsy, a doctor will first evaluate a patient's symptoms to determine whether he or she is experiencing seizures. From that point, a patient's medical history, blood tests, CT and MRI scans can provide more information about the electrical activity in their brain. Most people are able to stop or control seizures with appropriate medication, diet modifications, or surgery.

### Signs of Epilepsy

Seizures take many forms, affecting people in different ways. Here are some ways that symptoms may manifest before, during, and after a seizure:

*What epilepsy may feel like:*

- Before the start of a seizure, warning symptoms such as blurring vision, racing thoughts, panic, 'strange' feelings, déjà vu, nausea, headache, dizziness or numbness.
- Loss of consciousness or awareness.
- Visual hallucinations, out of body sensations, distracted and confused feelings, pleasant sensations, or panic.
- Loss of vision or hearing, unusual smells and tastes, or body parts that look or feel differently.
- As a seizure finishes, common symptoms include sleepiness, confusion, memory loss, dizziness, slow response time and feelings of anxiety, fear or frustration.

*What epilepsy may look like:*

- Difficulty talking (may stop talking, talk without making sense, or make garbled noises.)
- Drooling and unable to swallow.
- Repeated blinking or staring. Eyes may move upward or to one side.
- Rigid and tense muscles, or drooping muscles and an inability to move.
- Repeated movements such as handwringing, lip-smacking, dressing or undressing.
- Tremors, convulsions, jerking or twitching movements in part or all of the body.
- Sweat, dilated pupils and change in skin color (flushed or pale).
- Racing heart and difficulty breathing.
- Lost control over urine or stool.

Seizures may occur unprovoked, or in reaction to different types of stimulation; this is called a 'reflex' seizure. Common stimuli that can trigger reflex seizures include flashing lights, loud noises, changes in temperature, sudden touch, or performing certain tasks such as typing or reading. Stress and lack of sleep can also increase seizure risk.

Seizures can go undetected when they occur extremely briefly. So-called absence seizures last only a few seconds, during which a person 'blanks out' or stares into space. Absence seizures may be mistaken for consistent daydreaming or inability to pay attention.

### **How Epilepsy Might Impact Behavior**

Certain health and behavioral problems occur more often in people with seizures than people without them. These related conditions could be caused by the seizures themselves, or result from the underlying conditions causing excess electrical activity in the brain. Common related conditions include:

- Problems sleeping.
- Unexplained injuries, falls or illnesses.
- Increased risk of motor vehicle accidents.
- Not doing well at home, school, work, or with friends.
- Cognitive or learning problems.
- Depression symptoms, anxiety symptoms or changes in mood and behavior.

During a seizure, individuals may occasionally become extremely agitated or be experiencing hallucinations; during post-seizure confusion, they may be easily frightened, have difficulty communicating and lash out at perceived threats such as physical restraint. Some individuals have been reported to have episodes of aggressive behavior between seizures (interictal aggression), or possibly during seizures may have movements that are perceived as violent. Some individuals with epilepsy may thus be at greater risk of charges like disorderly conduct or resisting arrest as a result of behaviors they cannot control.

Although people with epilepsy have sometimes been stereotyped as more violent and unstable than the average person, research has not born out this conclusion. Rather, individuals with epilepsy are no more likely than others to act aggressively or criminally when other factors, such as trauma and substance abuse, are controlled for.

### **Resources for More Information**

- Epilepsy Foundation, <http://www.epilepsy.com/>
- International League Against Epilepsy, <http://www.ilae.org/>
- Journal of Epilepsy and Behavior, <http://www.epilepsybehavior.com/content/aims>

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## Executive Function Impairment

Executive Function Impairment (EFI) is not a specific disorder, although some do use the term Executive Function Disorder. Instead, it is an umbrella term used to describe types and components of other disorders that are characterized by trouble with planning for the future, time management, being able to initiate and continue tasks and activities, and breaking projects into smaller components to accomplish them. EFI is most commonly associated with attention-deficit/hyperactivity disorder (ADHD), of which a pattern of inattentiveness is one of the primary symptoms. EFI is also associated with other disorders, including autism spectrum disorder, fetal alcohol syndrome, obsessive-compulsive disorder, Tourette's syndrome, schizophrenia, and substance use disorders. Individuals with traumatic brain injuries (TBI) may also experience executive functioning deficits. However, because the Diagnostic and Statistical Manual of Mental Disorders (DSM) does not contain a diagnostic category for EFI, individuals may have difficulty being accurately assessed and treated for their EFI symptoms.

### Signs of Executive Function Impairment

EFI is characterized by mental and behavioral impairments that can give the impression that an individual is lazy, careless, or willfully defiant. Because EFI affects both the ability to accomplish tasks and memory, it can be particularly harmful to an individual's learning, which can lead to falling behind in school if the individual does not receive appropriate supports. Symptoms of EFI typically interfere with a child's education, which is one of the primary signs that an individual may have EFI. Signs of EFI include:

- Difficulty in planning and initiation.
- Inability to multitask.
- Difficulty shifting between tasks.
- Difficulty processing, storing, and/or retrieving information.
- Loss of interest in activities.
- Challenges in planning for the future.
- Tendency to make careless errors and not catch them.
- Difficulty with working memory, causing the individual to not remember instructions or tasks.

### How Executive Function Impairment Might Impact Behavior

Executive functions are key for coping with unpredictable real-life situations. An individual with EFI may have trouble responding to changes to normal routine, and may react to changes in ways that seem bizarre or potentially offensive. Moreover, EFI may cause a person to lack the filter that

others typically use to avoid making an inappropriate or offensive statement. Positive social interactions may be difficult for individuals with EFI.

Because it is not a standalone disorder, individuals with EFI are generally diagnosed with another disorder such as ADHD. They tend to have a history of behavioral problems in school and poor academic achievement because of their inattentive behavior.

In addition to negatively affecting academic performance, EFI can interfere with day-to-day functioning, including personal and professional relationships and performance at work. It may manifest as:

- Poor social skills and trouble getting along with others.
- Tendency to make inappropriate statements or act oddly.
- Difficulty planning or working towards goals.
- Problems staying on task or holding down a job.
- Trouble adapting to changes in life or daily routine.

Various executive functions, such as goal setting, planning, initiating, self-awareness, self-monitoring, and self-evaluation, may also be affected by traumatic brain injuries (TBI). An individual with TBI may seem disorganized and need help from family or friends. The person may have trouble starting tasks and setting goals to complete them. The individual may react impulsively to situations.

### **Resources for Additional Information**

- ADDitude: Strategies and Support for ADHD & LD: <http://www.additudemag.com/>
- Children's Resource Group: <http://www.childrensresourcegroup.com/>

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## Fetal Alcohol Syndrome Disorders

Fetal Alcohol Syndrome Disorder (FASD) is an umbrella term used to describe several developmental disorders that can occur when a fetus is exposed to alcohol. When a mother drinks, alcohol is passed through her bloodstream to the fetus, whose body is not yet able to process it without potential harm. After a baby is born, alcohol may still be passed on through breast milk, also creating a risk of reduced brain development.

FASDs can affect individuals physically, mentally, and behaviorally. The CDC has estimated that up to 1 in 20 U.S. school children may have one or more FASDs, but also has found that the disorders are commonly misdiagnosed or underdiagnosed. The neurological and birth defects caused by fetal alcohol exposure have lifelong impacts and FASD can cause physical and mental disabilities of varying levels of severity, including intellectual disability. However, early intervention therapy and ongoing support programs can help individuals affected by FASD reach their full potential and lead happier lives.

### Signs of Fetal Alcohol Syndrome Disorders

FASD symptoms include physical characteristics as well as mental and behavioral impairments. Certain individuals will experience symptoms to a greater degree than others, and in different combinations. Some symptoms can be identified at birth, while others become recognizable later in life.

#### *Physical Traits Associated with FASD:*

- Facial dysmorphism such as a small head, small eyes, a short nose, flattened cheekbones and an underdeveloped upper lip.
- Joint, limb and finger deformities.
- Growth problems. (Small at birth, with ongoing growth deficits.)
- Vision difficulties or hearing problems.
- Poor coordination, balance and motor skills.
- Heart defects, kidney and bone problems.

#### *Neurobehavioral Symptoms:*

- Difficulty processing information, remembering information, and understanding abstract concepts such as time or money.
- Short attention span and poor impulse control.
- Difficulty regulating emotions or regaining composure without outside assistance. Easily frustrated.
- Difficulty reasoning, problem-solving, and understanding cause and effect.

- Needing frequent cues and outside feedback to motivate action.
- Jittery or hyperactive.
- Higher risk of co-occurring mental disorders such as bipolar disorder, schizophrenia or ADHD.

### **How Fetal Alcohol Syndrome Disorder Might Impact Behavior**

Fetal alcohol exposure's damaging effects on the brain and central nervous system can lead to significant challenges for individuals with FASD in daily life. The difficulties that individuals with FASD have in functioning and interacting with others may manifest through the following behavioral patterns:

- Difficulty in school.
- Poor social skills and trouble getting along with others.
- Difficulty planning or working towards goals.
- Problems staying on task or holding down a job.
- Trouble adapting to changes in life or daily routine.
- Increased chance of substance abuse or psychiatric distress.
- Inappropriate sexual behavior. (Lack of understanding of boundaries.)
- Difficulty managing emotions, impulses, and stimulation; tendency to 'melt down.'

Individuals with FASD face higher arrest and incarceration rates. Neurobehavioral FASD symptoms, such as reduced impulse control and increased emotional volatility, put affected individuals at disproportionate risk of legal trouble. Approximately half of all people with FASD become involved with the criminal justice system at some point in their lives.

Persons with FASD may take things because they do not understand the concept of ownership, for example, or 'lie' and confabulate because they cannot remember past events. After arrest or incarceration, individuals with FASD may have trouble remembering the rules needed to comply with authorities such as probation officers. Their vulnerability to interpersonal pressure may lead them to commit a crime in order to please someone, or to make a false confession. During courtroom proceedings, individuals with FASD may be perceived as behaving inappropriately, and may not exhibit remorse due to poor memory or inability to fully understand cause and effect.

### **Resources for More Information**

- National Organization on Fetal Alcohol Syndrome, <http://www.nofas.org/>
- FASD and the Criminal Justice System Factsheet, <http://www.mofas.org/wp-content/uploads/2015/09/FASDcriminaljustice2015.pdf>
- FASD Experts, <http://fasdexperts.com/index.shtml>
- American Association on Intellectual and Developmental Disabilities, <https://aaidd.org/home>



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## Intellectual Disability

Intellectual Disability (ID) is an impairment of general mental abilities that impacts an individual's ability to function with both conceptual and practical tasks. Individuals with ID can struggle with issues such as reasoning, social interactions, job responsibilities, and personal care. The 2013 revisions to the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Health Disorders (DSM-5) changed the diagnosis process so that a diagnosis of ID is no longer based on IQ scores alone, although a standardized assessment is still part of the diagnosis process. An individual with ID typically has an IQ of 70 or below, and can only be considered ID if symptoms begin during the individual's childhood. It often co-occurs with other conditions such as depression, attention-deficit/hyperactivity disorder, and autism spectrum disorder. There are a variety of causes for ID, including genetic, physical (the result of some infections or malnutrition), and environmental (such as drug or alcohol use during pregnancy, complications during pregnancy, or oxygen deprivation during or after birth).

Intellectual disability used to be referred to as "mental retardation," a derogatory term mostly no longer in use, even though it might still appear in some texts, programs, laws, or regulations.

### Signs of Intellectual Disability

There are three domains in which adaptive functioning is impaired for individuals with ID:

#### *The Conceptual Domain:*

- Skills in language, reading, writing, math, reasoning, knowledge, and memory.

#### *The Social Domain:*

- Empathy, social judgment, interpersonal communication skills, the ability to make and retain friendships, and similar capacities.

#### *The Practical Domain:*

- Self-management in areas such as personal care, job responsibilities, money management, recreation, and organizing school and work tasks.

An individual with ID begins showing symptoms early in childhood as he or she develops more slowly than their peers and has more trouble learning. ID tends to manifest in common symptoms such as:

- Learning more slowly than other children of the same age.
- Rolling over, sitting up, crawling, or walking later than developmentally appropriate.
- Difficulty communicating or socializing with others.
- Lower than average scores on IQ tests.

- Difficulties speaking, or beginning to speak later than developmentally appropriate.
- Having problems remembering things.
- An inability to connect actions with consequences.
- Difficulty with problem-solving or logical thinking.
- Trouble learning in school.
- An inability to do everyday tasks like getting dressed or using the restroom without help.

### **How Intellectual Disability Might Impact Behavior**

Intellectual disability is a lifelong condition that cannot be cured, but services and support – when available – play an important role and can enable the person to thrive. However, the functional gaps between adults with ID and adults without the condition may grow wider over time. Accordingly, adults with ID will not always act in a way that other adults would.

Individuals with ID may have a strong need to be accepted by others, which can lead them to agree to help with criminal activities to gain friendship; it may be that the individual with ID does not understand that the actions are criminal, or that there may be consequences for the behavior. When questioned by law enforcement, individuals with ID may unintentionally misunderstand questions and give answers that leave them more vulnerable to arrest and incarceration.

Although each individual with ID is unique, there are some common behaviors that may complicate their interactions with the criminal justice system. Individuals with ID may:

- Hide their disability.
- Pretend to understand their rights even if they do not.
- Not understand or respond to commands, instructions, etc.
- Act upset at being detained and/or try to run away.
- Try to appease interrogators by saying what the police want to hear.
- Have difficulty describing facts or details.
- Confess to crimes they did not commit.<sup>1</sup>
- Be easily influenced by and eager to please others.
- Be unaware of how serious or dangerous the situation is.
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### **Resources for More Information**

- The Arc: <http://www.thearc.com/>
- MentalHelp.net: <https://www.mentalhelp.net/>
- Project Ideal: <http://www.projectidealonline.org/>
- American Association on Intellectual and Developmental Disabilities: <https://aaidd.org/about-aaidd/mission#.WXI9RYQrJhE>
- Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), American Psychiatric Association, “Intellectual Disability,” p. 33

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<sup>1</sup> Robert Perkse, “Perske’s List: False Confessions From 75 Persons With Intellectual Disability,” American Association on Intellectual and Development Disabilities, October 2011, <https://aaidd.org/docs/default-source/publications/perske-s-list-false-confessions-from-75-persons-with-intellectual-disability.pdf?sfvrsn=0>.

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## Major Depressive Disorder

Major Depressive Disorder (MDD) is characterized by overwhelming feelings of sadness or despair, isolation, and a diminished interest in activities that used to bring pleasure. Because the word “depression” is used so often in our society, MDD is also generally characterized by what it is not: it is not the normal sadness or loneliness that everyone feels from time to time. It is not just feeling down in the dumps. It is not grief. Someone grieving the loss of a loved one may experience the same symptoms as a person with MDD, but in that context such symptoms are considered to be a normal and healthy response. Depression is one of the most common forms of mental illness; affecting more than 350 million people worldwide. It impacts every aspect of a person’s life and significantly impairs functioning, including work, relationships, social interactions, feelings, cognitive abilities, eating, sleeping, and physical health. Women experience depression more often than men, and experience more severe forms of depression.

### Signs of MDD

For a MDD diagnosis, all signs of depression must be observable almost every day for nearly all of the day, for at least two weeks. MDD doesn’t come and go or significantly fluctuate; it is a persistent and intense pattern of thought, emotion, and behavior. It is important to note that symptoms must be significant deviations from each individual’s “normal” patterns of behavior (but one person’s normal may be markedly different from someone else’s).

#### *May look like:*

- Depressed mood (may present as irritability in childhood or adolescence).
- Persistent marked diminished interest or pleasure in almost all activities.
- Significant and unexplained weight loss or gain.
- Inability to sleep, or sleeping all day long.
- Unintentional and purposeless motions, or reduction of usual movements (people normally shift weight, cross and uncross legs, get up to walk around periodically, etc.).
- Fidgeting, or seeming drained of energy.

#### *May feel like:*

- Intense or deep feelings of sadness, emptiness, or hopelessness.
- No longer enjoying activities that used to seem interesting or pleasurable.
- Marked increase or decrease in appetite.
- Restless and/or agitated, or constantly exhausted and/or drained of all energy.
- Difficulty thinking or concentrating, or indecisiveness.
- Feelings of worthlessness or excessive/inappropriate guilt/regret (which may be delusional).

- Recurrent thoughts of death, suicidal ideations without a specific plan, specific plans to commit suicide, or attempting suicide.

If a person has depression symptoms that last for years rather than the months that MDD can last, he or she may receive a diagnosis of Persistent Depressive Disorder (PDD). Sometimes symptoms may be as severe as in MDD (previously called chronic major depressive disorder) and other times they may be slightly less intense (previously called dysthymic disorder). Dysthymia is characterized by not being able to feel “good” or whole.

### **How MDD Might Impact Behavior**

People with MDD may feel frustrated, angry, or desperate. The overwhelming majority of people with depression are neither violent nor criminal. That said, some studies have found that persons with depression are more likely to commit violent crimes than the general population.<sup>1</sup> Overall, research has been inconclusive regarding whether MDD leads directly to violent criminal behavior, or whether additional factors, such as poverty, unemployment, early childhood trauma, or drug use might cause both MDD and correlate with a higher likelihood of exhibiting criminal conduct.

People with MDD may use illegal or addictive substances as means of self-medicating if they are not receiving appropriate or complete treatment. Individuals using addictive substances have an extremely high rate of interaction with the criminal justice system, and even violent criminal behavior. On the other hand, perhaps surprisingly, some statistics suggest that illegal drug use decreases the rates of violent crimes by those with MDD. Antidepressants can be very important to the treatment of MDD, but some studies have shown that the risk of violence against self or others may increase in young people who take antidepressants.<sup>2</sup>

### **Resources for Additional Information**

- Article about Oxford University Study on depression and violent crime:  
<https://www.theguardian.com/society/2015/feb/25/diagnosed-depression-linked-to-violent-says-university-oxford-study-sweden>
- Gender, Mental Illness, and Crime: <https://www.ncjrs.gov/pdffiles1/nij/grants/224028.pdf>
- Psych Central: <http://psychcentral.com/disorders/depression-major-depressive-disorder-symptoms/>
- Diagnostic Criteria: <http://evolutioncounseling.com/major-depressive-disorder-dsm-5-criteria/>
- Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), American Psychiatric Association, “Major Depressive Disorder,” p. 160

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<sup>1</sup> Depression and violence: a Swedish population study, Fazel, Seena et al., The Lancet Psychiatry, Volume 2, Issue 3 , 224 – 232, March 2015.

<sup>2</sup> Molero, Yasmina et al., “Selective Serotonin Reuptake Inhibitors and Violent Crime: A Cohort Study,” Ed. Alexander C. Tsai. PLoS Medicine 12.9 (2015).

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## Posttraumatic Stress Disorder

Posttraumatic Stress Disorder (PTSD) is a trauma and stress related disorder, typically triggered by exposure to actual or threatened death, serious injury, or sexual violence. PTSD symptoms typically begin to manifest around three months after a traumatic event, but in other cases may not present for many years. PTSD may negatively affect individuals' physical health and their ability to function socially, educationally, and in their occupation. Although novel symptoms can appear, PTSD may also manifest as a worsening of pre-existing behaviors. PTSD and its manifestations may have impacted the behavior for which a criminal defendant has been convicted.

While PTSD can affect anyone who has suffered a traumatic event, there is an especially high occurrence of PTSD in war veterans, who go through traumatic, life-threatening experiences during combat. PTSD in veterans was sometimes referred to in the past as "shell shock," "battle fatigue" or "combat stress reaction." The prevalence of PTSD is higher than in the general population: while 7 to 8% of the population may have PTSD at some point in their lives, that number rises to 11 to 20% in war veterans (the number varies by service era).

### Signs of PTSD

Every person is unique, and PTSD can manifest very differently depending on gender, culture, and individual situations and histories. The American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM-5) breaks down the most common symptoms or manifestations of PTSD into four (4) categories that are helpful to understanding PTSD and identifying those who may have it:

#### 1) *Persistent Re-experiencing Symptoms*

*What these may feel like:*

- Intrusive memories of the traumatic event.
- Re-occurring nightmare about, related to, or symbolic of the trauma.
- Intense or prolonged distress after an internal or external reminder of the trauma.

*What these may look like:*

- Intense physical reaction to internal or external reminders of the traumatic event, as if the threat were real and current (e.g. rapid breathing, sweating, and nausea).
- Flashbacks in which a person feels and/or behaves as if they are currently experiencing the traumatic event again, possibly as extreme as experiencing a complete loss of awareness of their present surroundings.

## 2) Avoidance Symptoms

*What these may feel like:*

- Trying to avoid thinking of or talking about the event.

*What these may look like:*

- Avoiding people, places, or things that serve as reminders of the traumatic event. (For example, someone who has experienced an automobile accident may avoid driving or riding in a car. An abuse survivor may avoid not only the abuser, but anyone who might look or sound like the abuser. A combat veteran may avoid situations where they may experience loud noises or crowds of unfamiliar people.)

## 3) Negative Thoughts and Mood Symptoms

*What these may feel like:*

- Inability to remember important aspects of the traumatic event.
- Distorted thoughts about the cause or consequence of the traumatic event that lead to blaming others or self, and feelings of shame or guilt.
- Persistent anger, frustration, fear, shame, guilt, or other negative emotions.
- Inability to experience joy, love, satisfaction, or other positive emotions.
- Feelings of detachment, estrangement, or emotional numbness.
- Exaggerated negative beliefs about oneself, others or the future (e.g. feeling hopeless about one's future, "no one will ever love me", "the world is a terrible place", "I know I am going to die young", "no one can be trusted").
- Beliefs that you are being harassed or persecuted, or beliefs involving general suspiciousness about others' motives or intents.

*What these may look like:*

- Difficulty maintaining stable interpersonal relationships.
- Avoidance of people, social situations or even eye contact.
- Disinterest or decreased participation in activities that used to be enjoyed.
- Paranoid ideations.

## 4) Heightened Arousal or Reactivity Symptoms

*What these may feel like:*

- Irritable, quick temper, sudden aggressive outbursts, difficulty regulating emotions.
- Persistent feelings of stress, being on edge, guarded, or alert.
- Problems concentrating, remembering daily events, or following conversations.
- Difficulty sleeping (possibly related to nightmares or heightened safety concerns).<sup>1</sup>

*What these may look like:*

- An extreme startle response often perceived as jumpiness to loud noises or unexpected movements.

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<sup>1</sup> In addition, we now understand that some PTSD manifestations, such as avoidance behaviors, nightmares and emotional numbness, can differ greatly depending on cultural norms. For example, in Latin American cultures PTSD sometimes manifests as physical illness symptoms.

- Reckless or self-destructive behavior such as excessive drinking, dangerous driving, self-injury, gambling, or suicide attempts.

### **How PTSD Might Impact Behavior**

PTSD can frequently involve or lead to anxiety, depression, substance abuse, panic attacks, eating disorders, and suicidal thoughts or attempts. There is a correlation between PTSD and aggressive or criminal behavior, though the effects of PTSD on any particular individual are highly specific and situational. Here are some examples of how common PTSD symptoms may influence behavior:

- Individuals with PTSD may experience emotional numbness and engage in dangerous behaviors such as reckless driving for the adrenaline rush, as a way to “feel something” again. Self-blaming, depression, suicidal ideations, and hopeless feeling about the future could equally contribute to reckless, dangerous, or even criminal behaviors. Distorted views of other people, negative beliefs about the state of the world, and an emotional detachment or estrangement from others related to the syndrome could all feed into a disregard for, or an inability to fully understand, the potential risks reckless behaviors might cause.
- Alcohol or drug use is common among persons with PTSD as a form of self-medication: an attempt to drown out persistent distressing thoughts or memories, “relax” or get some sleep, or suppress debilitating anxiety or depression. Alcohol or drug use are also both common among those with PTSD as a form of self-harm.
- People with PTSD may have difficulties regulating their emotions or controlling their tempers. If so they could potentially be prone to sudden and violent outbursts. Some individuals with PTSD may not be capable of controlling aggressive behaviors that are tied to manifestations of the disease.
- Finally, in extreme cases, some people with PTSD may have flashbacks where they completely detach from the present reality and “relive” the traumatic event. In these cases they may be unaware of their *actual* surroundings, and may behave violently in self-defense because they mistakenly believe that their life is in danger.

### **Recent Developments**

In addition to direct exposure to trauma, the DSM-5 reflected updates from the prior edition, identifying other possible triggers for PTSD, including, witnessing trauma, learning second-hand of a family member or close friend’s trauma, experiencing sexual assault, or being repeatedly exposed to the details of a traumatic event (e.g. police officers repeatedly exposed to details of child abuse). The DSM-5 also now reflects that an immediate emotional reaction to the traumatic event is not required and there may be a later onset of symptoms.

### **Resources for More Information**

- National Center for PTSD: <http://www.ptsd.va.gov/>
- Gateway to Posttraumatic Stress Disorder Information: <http://www.ptsdinfo.org/>
- National Institute of Mental Health, Post-Traumatic Stress Disorder: <http://www.nimh.nih.gov/health/topics/post-traumatic-stress-disorder-ptsd/index.shtml>

- Death Penalty Information Center, *Battle Scars: Military Veterans and the Death Penalty* (2015): <https://deathpenaltyinfo.org/veterans>
- *PTSD as Criminal Defense: A Review of Case Law*:  
<http://www.jaapl.org/content/40/4/509.full.pdf>
- Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), American Psychiatric Association, “Posttraumatic stress disorder,” p. 271.



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## Schizophrenia

Schizophrenia is a serious psychiatric condition that can profoundly disrupt how a person thinks, feels and behaves. Persons with schizophrenia may seem like they have lost touch with reality, and have a hard time telling the difference between the imaginary and the real. About 1% of Americans are affected by schizophrenia, which requires long-term management and is thought to be influenced by genetics and chemical imbalances in the brain. The disease most commonly manifests between the late teens and early thirties, often slightly earlier for men, and slightly later for women. A small percentage of people with schizophrenia may experience the onset of symptoms after age forty. Although no cure exists for schizophrenia, many people with this condition are able to lead happy and productive lives with the help of appropriate treatment.

### Signs of Schizophrenia

Diagnosing schizophrenia may be challenging for several reasons. The onset of symptoms such as social withdrawal or emotional unpredictability during adolescence can be confused with common (or stereotypical), non-disordered teenage behaviors. Certain drugs such as methamphetamines and LSD can mimic schizophrenia symptoms, and many people who have the condition do not believe they have it (a phenomenon sometimes referred to as “anosognosia”).

Symptoms can develop either gradually or abruptly, and may manifest differently for people of different cultural backgrounds. For example, while hearing voices is a common schizophrenic symptom for people across cultures, studies have found that individuals experience varying ratios of positive voices to negative voices depending on their cultural background. Despite these potential variances, however, symptoms are generally grouped into three categories: positive, negative and cognitive symptoms. Diagnoses are made by identifying symptom patterns, as no single symptom is definitive.

#### 1) *Positive Symptoms (symptoms that most individuals do not experience, but are present in persons with schizophrenia)*

- Hallucinations of sounds, sights, smells, and touches that occur without external stimuli and that others cannot perceive, yet nevertheless feel very real. Voices may be threatening, aggressive, and commanding.
- Strange and delusional beliefs that do not change even when confronted with contrary facts and evidence. Common delusions include believing that you are being spied on, are secretly famous, possess special abilities, or are experiencing strange medical abnormalities.
- Unusual or dysfunctional ways of thinking, including jumping between topics without apparent logic. May talk nonsensically or make up sounds.
- Strange body positions, physical tics, motionlessness or agitated movements.

- Inappropriate or bizarre behavior.
- Irrational, angry or fearful responses. Unpredictability.

2) *Negative Symptoms (lack of normal emotional responses and thought processes)*

- Lack of motivation and initiative.
- Extreme apathy. Little interest in life and seeming inability to experience pleasure.
- Social withdrawal.
- Dull, expressionless ways of speaking and behaving. Emotionally unresponsive.
- Reduced speech and thought content.
- Unable to start or follow activities.
- Difficulty maintaining relationships.

3) *Cognitive Symptoms (impaired concentration, memory and cognitive function)*

- Difficulty understanding outside information, remembering things, organizing thoughts and expressing thoughts.
- Slow thought processes.
- Unaware, or unwilling to believe that they are suffering from a mental disorder.
- Short attention span and inability to complete tasks.

### **How Schizophrenia Might Impact Behavior**

The vast majority of persons with schizophrenia are not violent, and in fact are more likely to harm themselves than others. However, risks of violence and involvement in the criminal justice system for individuals with schizophrenia rise significantly when the condition is combined with substance abuse. Individual experiencing schizophrenic psychosis need treatment rather than incarceration, as failing to respond to the condition only increases these risks.

The small percentage of individuals with schizophrenia who do act out aggressively, or are charged with misdemeanors such as trespassing, may commit these crimes under the influence of hallucinations and delusions that they believe are real. Their acts may be motivated by fear, paranoia, and/or a desire for self-preservation rather than malice, and this may impact their ability and willingness to cooperate with authority figures. Physical schizophrenia symptoms such as strange bodily tics and an emotionless way of speaking may confuse or frighten others in, for example, a courtroom setting, and schizophrenics may have difficulty communicating helpful information – as well as their basic needs and desires – to their legal advocates. Persons suffering from negative schizophrenia symptoms may be unfairly stigmatized as lazy, unmotivated and uncaring.

Additionally, the medications prescribed for schizophrenia often entail intense side-effects that create new problems for persons affected, even while treating disorder symptoms. In addition to physical health complications, antipsychotic drugs may cause restlessness and uncontrollable movements such as shaking, spasms and tics; patients may move their tongue or lick their lips obsessively in an attempt to alleviate dry mouth. These side-effects may complicate individuals' willingness to cooperate with suggested medication plans, as well as potentially make them appear "crazy" or "unbalanced" to, for example, juries or correctional officers. Persons with schizophrenia may be disadvantaged in a courtroom setting where people are evaluating their behavior or testimony and are looking for expressions of remorse or innocence, but any active symptoms put them at risk of stereotyping and stigmatization.

## Recent Developments

The medical and social understanding of schizophrenia has advanced significantly in the last two decades. For a significant portion of the twentieth century, schizophrenia was attributed to causes such as bad parenting, individual weakness or character defects. We now know this is not accurate and that schizophrenia is a clinical brain disorder that has a significant genetic component.

Additionally, there is increasing evidence for the many ways that schizophrenia may cause significant disruptions in the lives and health of those who suffer from the disorder. Persons with schizophrenia face disproportionately high risks of unemployment and homelessness as a result of their symptoms; they are also far more likely than the average person to commit self-harm or suicide. The rate of substance abuse among people with schizophrenia is roughly four times that of the general population. There is some evidence that individuals with the disorder may be more vulnerable to addiction as the result of brain chemistry that rewards addictive pleasures. Persons experiencing schizophrenic symptoms may also turn to drugs or alcohol in an attempt to alleviate their symptoms, reduce medication side-effects, or numb their feelings of depression and anxiety.

## Resources for More Information

- Schizophrenia and Related Disorders Alliance of America, <http://www.sardaa.org/>
- Schizophrenia.com, <http://schizophrenia.com/>
- National Institute of Mental Health, <http://www.nimh.nih.gov/health/topics/schizophrenia/index.shtml>
- National Alliance on Mental Health, <http://www.nami.org/Learn-More/Mental-Health-Conditions/Schizophrenia>
- Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), American Psychiatric Association, “Schizophrenia Spectrum and other psychotic disorders,” p.87.

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## Specific Learning Disorder

Specific learning disorders (SLDs) are defined as impairments to one or more basic cognitive processes involved in understanding or using language that can manifest as difficulties listening, thinking, concentrating, speaking, reading, writing, spelling, or doing mathematical calculations. SLDs are diagnosed based on a variety of cognitive manifestations, including an inability to perform on a level appropriate for the person's intelligence and age. Learning disorders cause significant interference with academic or occupational performance, and day-to-day functioning.

### Signs of a Learning Disorder

According to the DSM-5, someone with a learning disorder will exhibit one or more of the following:

- Difficulty reading: inaccurate or slow and effortful reading, reading aloud incorrectly or slowly, guessing at words, difficulty sounding words out.
- Difficulty understanding what is read.
- Difficulty with spelling.
- Difficulty with writing: making grammatical or punctuation errors, using poor paragraph organization, ideas lacking clarity.
- Difficulty understanding numbers, text describing numbers or percentages, or calculations: counts on fingers, doesn't understand number relationships, is confused while computing numbers or changes computation methods mid-computation.
- Difficulty with mathematical reasoning: having severe difficulty applying mathematical concepts, facts, or procedures to solve problems.

### Types of Learning Disorders

Classifications of different types of learning disorders (such as Auditory Processing Disorder (APD), Dyslexia, Dysgraphia, Dyscalculia, Language Processing Disorder, Non-Verbal Learning Disabilities, Visual Perceptual/ Visual Motor Deficit) are no longer included in the DSM-5 because previous classifications were overly narrow and specific which caused many people with learning disorders to go undiagnosed and untreated. The DSM-5 now just has one overall diagnosis of SLD that incorporates all deficits that impact academic achievement, including:

#### *Impairments in reading:*

Impairments in reading fluency, word accuracy, and reading comprehension. Dyslexia is still considered to be an alternative term for this specifier, and is generally characterized by problems with reading accuracy fluency, poor spelling and decoding.

### *Impairment in mathematics:*

Including impairments in number sense, memorizing arithmetic facts, calculation accuracy or fluency, and mathematical reasoning accuracy. Dyscalculia is still considered to be an alternative term for this specifier and is generally characterized by problems with processing numerical information, learning arithmetic facts, and calculation accuracy or fluency.

### *Impairment in writing:*

Including impairments in spelling accuracy, grammar and punctuation accuracy, and clarity or organization of writing.

## **How a Learning Disorder Might Impact Behavior**

It is important to note that SLDs are not just conditions affecting academic performance in school; they also impair social learning, which can be important to decision making throughout life. People with SLDs may experience/exhibit:

- Challenges filling out forms.
- Difficulties communicating with or understanding others
- Difficulties expressing themselves.
- Difficulties remembering or concentrating.
- Impaired social skills, social awareness, or ability to accurately read gestures, expressions, or social cues.
- Lower self-esteem.
- Increased suggestibility/may be more easily influenced by others.
- Challenges with self-control, or impulse control.
- Impaired decision making or ability to plan.
- Difficulties understanding or predicting the consequences of their behavior.

In court, people with SLDs may have difficulties assisting in their own defense, and might experience harsher sentencing because of “inappropriate” behaviors or attitudes.

People with SLDs have higher rates of school dropout and unemployment. People with SLD sometimes develop what is referred to as “learned helplessness”, which is a sense of powerlessness that results from persistent failure to succeed. People with learned helplessness may believe that it is pointless to try to succeed or conform to social norms because personal history has clearly demonstrated that, regardless of the amount of effort exerted, success is impossible. Learned helplessness can lead to apathy and depression.

It can be frustrating and overwhelming to have an SLD. Such feelings may lead to behaviors such as defiance, “lashing out”, not listening, or “shutting down.” “Bad behavior” may also develop as a way to avoid difficult or frustrating tasks, or because a person with an SLD is the target of bullying in school.

People with SLDs are also more likely to get in trouble at school or with the law. They experience higher rates of disciplinary action and expulsion in schools, not just because of SLD-related behavioral problems, but also because many schools are unable or unwilling to teach students with SLD. Poor social skills or abrasive manners may lead to harsher or more frequent responses to minor infractions. People with SLDs tend to be treated differently, and more harshly, in the

criminal justice system as well; they experience higher rates of arrest and incarceration, and longer or more severe punishments, than do persons without SLDs.

### **Resources for Additional Information**

- Psych Center: <http://psychcentral.com/disorders/specific-learning-disorder/>
- Nancy Coward, *Disorganized Crime: Learning Disability and The Criminal Justice System*, 13 Criminal Justice 2, 11-16 (1998).
- Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), American Psychiatric Association, "Specific Learning Disorder," p. 66.

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## Substance-Related and Addictive Disorders

### Substance Use Disorders

Substance-related disorders are broken up into two larger subtypes. The first are “substance use disorders.” Substance use disorder is the use of one or more substances that leads to significant impairments or distress in a person’s life. There are at least nine types of substances that may cause such impairments: alcohol; cannabis (e.g., marijuana); hallucinogens; inhalants; opioids (e.g., heroin); sedatives, hypnotics, or anxiolytics (e.g., valium, “Quaaludes”); stimulants (e.g., cocaine, methamphetamine); tobacco; and other substances such as anabolic steroids. Regardless of the type of substance, the signs/criteria for the conditions are the same, and they are all measured on a continuum from mild to severe.

The second subtype of substance-related disorders is “substance-induced disorders”. These are physical symptoms or mental disorders that are caused by/induced by substance use, and include, but are not limited to: intoxication, withdrawal, psychotic disorder, bipolar disorder, depressive disorder, anxiety disorder, obsessive-compulsive disorder, sleep disorders, sexual dysfunctions, delirium, and neurocognitive disorders. It is important to note that while substance use can induce certain psychological disorders it can also be caused by/a symptom of psychological disorders as well; substance abuse is a common form of self-harm or self-medication. This is particularly true for PTSD, depression, anxiety disorders, personality disorders, and schizophrenia.

### Signs of Substance Use Disorder

#### *Impaired Control:*

- Using more of the substance, or for a longer period of time, than intended.
- Having wanted to/tried to cut down or stop using but couldn’t.
- Spending significant or recurring time using, obtaining, or recovering from use.
- Having cravings so intense that it is difficult to think about anything else.

#### *Social Impairment:*

- Continuing use despite interfering with or causing problem in school, work, taking care of the home or family.
- Continuing use despite causing trouble with friends or family.
- Giving up or cutting back on activities that were important, interesting or enjoyable in order to use.

### *Risky Use:*

- During or after use, behaving in ways that increase the chances of injury (e.g., driving, swimming, walking in dangerous areas, having unsafe sex).
- Continuing use despite causing or worsening other health or emotional problems.

### *Tolerance and Withdrawal:*

- Tolerance: Needing to use more of the substance, or to use it more often, than previously necessary to obtain the desired effect.
- Withdrawal: Experiencing unpleasant physical symptoms when the effects of use begin to wear off.

## **Recent Developments**

The fifth edition of the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM-5) removed distinctions in past editions between "abuse" and "addiction" and now uses one broader category, substance use disorder, measured on a spectrum from mild to severe. Poly-substance abuse syndrome, the addiction to getting high with little or no preference for which drug to use to achieve the desired effect, is now considered a type of substance use disorder, because the new broader definition includes the use of "one or more" substances.

In the DSM-5, drug cravings were added to the list of symptoms that an individual having a substance use disorder may exhibit. The DSM-5 also increased the number of symptoms necessary to be considered to have a substance use disorder, making it more difficult to qualify as having a mild substance use disorder than it had previously been. Problems with law enforcement was removed in the new DSM from the list of symptoms of substance use disorders, but it was only done so because of cultural differences that made it difficult to apply the criteria internationally.

## **Addictive Disorders/ Non-Substance-Related Disorders**

Addictive disorders or non-substance-related disorders are described as behavioral addictions. Gambling is currently the only addictive disorder listed in this section. Gambling problems had previously been included under impulse control disorders but research has now shown that gambling has a very similar impact on the brain as do substances commonly thought to be addictive; it causes an intense activation of the rewards center of the brain that can lead to a disregard of normal or healthy activities. Understanding that gambling is just as much an addiction as alcoholism or drug use is significant in the understanding and treatment of those who have the disorder.

## **How Substance-Related and Addictive Disorders Might Impact Behavior**

Those with a substance-related or addictive disorder may exhibit:

- Bloodshot eyes or abnormal pupil size.
- Sudden weight gain or loss.
- Changes in sleep patterns.
- Unusual body odor.



- Impaired coordination or tremors.
- Slurred speech.
- Sudden change in friends or hobbies.
- Legal problems.
- Financial problems.
- Relationship problems.
- Appear fearful, anxious or paranoid.
- Unusual hyperactivity or agitation.
- Lack of motivation.
- Sudden mood swings or aggressive outbursts.
- Drop in attendance or performance at school or work.
- Frequently getting into fights or accidents.

Because addictive substances (or behaviors) cause such an intense activation of the rewards system of the brain, they may lead to participation in unhealthy, risky, or even criminal behaviors, in order to obtain or continue using the substance. It is important to understand how intense the drive to continue drug use (or addictive behavior) can be. Persons experiencing addiction may become consumed by the need to use, and may neglect their professional or personal obligations, hygiene, nutrition, economic security, their own safety, or the safety of others. Some people with such conditions have committed armed robbery, prostituted themselves, or even committed murder, as a means of financing their addiction.

In addition to the crimes that are committed as a means of obtaining the addictive substance (or continuing addictive behaviors), crimes are also committed under the influence of substances. Drugs may decrease inhibitions; inhibit reasoning abilities; distort thought processes; cause intense aggression, depression, or anxiety; create paranoia; cause feelings of invisibility; or induce hallucinations. While under the influence, many individuals cannot understand, or be concerned with, the consequences of their actions. Substance use may lead to driving under the influence (DUI), domestic abuse, murder, and sexual assault.

### **Resources for Additional Information**

- MentalHealth.gov: <https://www.mentalhealth.gov/what-to-look-for/substance-abuse/>
- Alcoholics Anonymous (not just for alcohol use disorder, but all substance-related and addictive disorders): <http://www.aa.org/>
- For Family and Friends: <http://al-anon.org/home>
- Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), American Psychiatric Association, "Substance Related and Addictive Disorders," p. 481