Psychological Disorders

Understanding Psychological Disorders

- Psychological disorders are a characteristic set of thoughts, feelings or actions that cause noticeable distress to the sufferer, cause maladaptive functioning in society, or are considered deviant by the individual's culture.

Biomedical *vs.* Biopsychosocial Approaches

- Biomedical Approach: therapy includes interventions that rally around symptom reduction of psychological disorders
    - Approach assumes that all disorders have their roots in a biomedical disturbance
    - Fails to take into account lifestyle and socioeconomic status
    - This is most effective when supplemented with a broader approach to diagnosis and treatment
- Biopsychosocial Approach: method assumes that there are biological, psychological, and social components to an individual's disorder
    - Biological component is something in the body. E.g. – having a genetic syndrome
    - Psychological component stems from the individual's thoughts, emotions or behaviors
    - Social component results from individual's surroundings and can include issues associated with class discrimination or stigmatization
    - All three of these aspects are considered in the biopsychosocial approach.
    - Goal of this approach is to provide **direct therapy** (medication or periodic psychologist meetings) and **indirect therapy** (aims to increase social support by educating and empowering family and friends of the affected individual)

Classifying Psychological Disorders

- ***Diagnostic and Statistical Manual of Mental Disorders (DSM)*** was created to help clinicians in considered all of the above factors.
    - Used as a diagnostic tool that has statistical data in the US
    - Compilation of many known psychological disorders
    - Based on the description of symptoms. Physicians fit lists of compiled symptoms from a patient into a category and then diagnose the patient

Types of Psychological Disorders

Schizophrenia

- Prototypical psychotic disorder
    - Individuals with a **psychotic disorder** suffer from one or more of the following conditions: delusions, hallucinations, disorganized thought, disorganized behavior, catatonia (above movements from a mental disorder), and other negative symptoms.
- For someone to be diagnosed with schizophrenia, they must show continuous signs of the disturbance for at least six months
    - At least one month must include active symptoms (delusions, hallucinations, or disorganized speech)

- Symptoms can be divided into positive and negative
    - Positive symptoms are behaviors, thoughts, or feelings added to normal behavior.
        - E.g. – delusions/hallucinations, disorganized though, and disorganizes/catatonic behavior
        - Are sometimes considered as two distinct dimensions – psychotic dimension and disorganized dimension
    - Negative symptoms are those that involve the absence of normal or desired behavior
        - E.g. – disturbance of affect and avolition (decrease in motivation)

Positive Symptoms

- Delusions: false beliefs that are not in-line with reality and are not shared by others in the individual's culture
    - Beliefs are maintained despite strong contrary evidence.
    - Delusion of Reference: the belief that common elements in the environment are directed towards the individual
        - E.g. – person may believe that characters in T.V show are directly to them
    - Delusions of Persecution: the belief that the person is being deliberately interfered with, discriminated against, plotted against, or threatened
    - Delusions of Grandeur: the belief that the person is remarkable in some significant way.
        - Common in bipolar disorder
    - Thought Broadcasting: belief that one's thoughts are broadcasted directly from one's head to the external world
    - Thought Insertion: belief that thoughts are being placed in one's head
- Hallucinations: perceptions that are not due to external stimuli but seem like reality.
    - Most common form is auditory: people think that they are hearing voices
    - Visual and tactile hallucinations are less common, but can be seen with drug use or withdrawal.
    - Olfactory and gustatory (tasting) are even less common, but can occur before a seizure
- Disorganized thought: characterized by a **loosening of associations**
    - E.g. - Listener of a speech is unable to follow the train of thought
    - Speech may seem so disorganized that it seems to have no structure
    - Sometimes called **word salad**
    - Neologisms: invented words by a schizophrenic person
- Disorganized Behavior: inability to carry out activities of daily living such as paying bills. Maintaining hygiene, and keeping appointments
- Catatonia: refers to certain motor behaviors characterizes of people with schizophrenia
    - Spontaneous movement and activity may be reduced or patient may maintain a rigid posture, refusing to move

- Opposite may include useless and bizarre movements that are not caused by external stimuli, **echolalia** (repeating another's word), or **echopraxia** (imitating others actions)

Negative Symptoms

- Disturbance of Affect: **affect** refers to the experience and display of emotion
  - May include **blunting:** severe reduction in the intensity of affect expression
  - **Flat Effect (emotional flattening):** no signs of emotional expression
  - **Inappropriate affect:** affect is clearly discordant with the content of the individual's speech
- Avolition: decreased engagement in purposeful, goal-directed actions

Prodromal Phase

- Phase before schizophrenia that is characterized by poor adjustment.
- Exemplified by clear evidence of deterioration, social withdrawal, role functioning impairment, peculiar behavior, inappropriate affect, and unusual experiences.
- Followed by the active phase of symptoms
- Prognosis of schizophrenia is best when the onset of symptoms is intense and sudden.

Depressive Disorders

Major Depressive Disorder

- A **mood disorder** that is characterized by at least one major depressive episode.
- Major Depressive Episode: period of at least two weeks with at least five of the following symptoms:
  - Prominent and relatively persistent depressed mood
  - Anhedonia: loss of interest in all or almost all formerly enjoyable activities
  - Appetite disturbances
  - Substantial weight changes
  - Sleep disturbances
  - Decreased energy
  - Feelings of worthlessness or excessive guilt
  - Difficulty concentrating or thinking
  - Psychomotor symptoms – i.e. feeling slowed down
  - Thoughts of death or attempts at suicide

At least one symptom must be one of these

These symptoms must cause significant distress or impairment in functioning

- Persistent Depressive Disorder: given to individuals who suffer from **dysthymia** - a depressed mood that isn't severe enough to meet the criteria of a major depressive episode – for at least two years
  - Diagnosis can also be given to individuals with major depressive disorder that lasts at least two years
  - Diagnosed individuals may suffer from a combination of major depressive episodes and dysthymia

Seasonal Affective Disorder (SAD)

- Major depressive that is characterized by seasonal onset. It is not a freestanding diagnosis in the DMS-5
- Depressive symptoms are only present in winter months

- May be related to abnormal melatonin metabolism and is often treated with **bright light therapy**
    - Patient is exposed to a bright light for a specific amount of time each day.

Bipolar and Related disorders

- Major type of mood disorder that is characterized by both depression and mania
- **Manic episodes**: abnormal and persistently elevated mood lasting at least one week
    - Have at least three of the following:
        - Increased distractibility
        - Decreased need for sleep
        - Inflated self-esteem or grandiosity
        - Racing thoughts
        - Increased goal-directed activity or agitation
        - Pressured speech or increased talkativeness
        - Involvement in high-risk behavior
    - Episodes have a rapid onset and briefer duration than depressive episodes.
    - May include psychosis
- Bipolar I disorder: manic episodes with or without major depressive episodes
- Bipolar II disorder: hypomania with at least one major depressive disorder
    - **Hypomania:** does not significantly impair functioning and does not have psychotic features. Individual may be more energetic and optimistic however.
- Cyclothymic disorder: combination of hypomanic episodes and periods of dysthymia that are not severe enough to qualify as a major depressive episode.

Monoamine or catecholamine theory of depression

- Theory to describe the cause of mood disorders.
- Too much norepinephrine and serotonin in the synapse may lead to mania.
- Too little of the above would lead to depression

Anxiety Disorders

- Most common disorder in women of all ages, substance use disorder is most common psychiatric disorder for men

Generalized Anxiety disorder

- Common to the population and is defined as a disproportionate and persistent worry about many different things
- Individuals often have physical symptoms like fatigue, muscle tension and sleep tension

Specific Phobias

- Phobia is an irrational fear of something that results in a compelling desire to avoid it.
- Most common type of anxiety disorder is a phobia
- **Specific Phobia:** where anxiety is produced by a specific object or situation

Social Anxiety Disorder

- Characterized by anxiety that is due to social situations
- Individuals have a persistent fear when exposed to social or performance situations that may result in embarrassment

Agoraphobia

- Anxiety disorder caused by fear of being in places or situation where it might be hard to escape.
- Individuals tend to be uncomfortable leaving their homes in fear of a panic attack

Panic Disorder

- Anxiety disorder that consists of repeated panic attacks. Symptoms of panic attacks include:
    - Fear and apprehension, trembling, sweating, hyperventilation, and a sense of unreality
- Individuals who suffer from panic attacks are suddenly stuck by a *sense of impending doom* and may be convinced that they are about to lose their mind.
- Patients are treated for a long period of time since it tends to reoccur.
- Panic disorder is frequently accompanied by agoraphobia.

Obsessive-Compulsive and Related Disorders

Obsessive-Compulsive Disorder (OCD)

- Characterized by **obsessions**, that produce tension, and **compulsions** (repetitive tasks) that relieve tension but cause significant impairments in a person's life.
- Obsession raises stress level while compulsion relieves this stress.
    - Relationship between the two is key and they should balance

Body Dysmorphic Disorder

- Person has an unrealistic negative evaluation of their personal appearance and attractiveness.
- Body preoccupation disrupts day-to-day life and the sufferer may seek multiple plastic surgeries or other extreme interventions

Trauma- and Stressor-Related Disorders

- Posttraumatic stress disorder (PTSD): occurs after experiencing or witnessing a traumatic event and consists of intrusion symptoms, avoidance symptoms, negative cognitive symptoms, and arousal symptoms
- Intrusion Symptoms: includes recurrent reliving of the event, flashbacks, nightmares, and prolonged distress
- Avoidance Symptoms: deliberate attempts to avoid the memories, people, places, activities, and objects associated with the trauma.
- Negative Cognitive Symptoms: inability to recall key features of the event, negative mood or emotions, feeling distanced from others, and a persistent negative view of the world
- Arousal Symptoms: increased startle response, irritability, anxiety, self-destructive or reckless behavior, and sleep disturbances
- PTSD is diagnosed when a particular number of these symptoms persist for at least one month
- Acute Stress disorder: same symptoms last for less than one month, but more than three days.

Dissociative Disorders

- Person avoids stress by escaping from their identity.

Dissociative Amnesia

- Characterized by an inability to recall past experiences
- Dissociative simply means that the amnesia is not due to a neurological disorder
- Disorder is often linked to trauma
- Dissociative Fugue: a sudden, unexpected move or purposeless wandering away from one's home. May occur in some individuals who have this type of amnesia.
- Individuals in a fugue state are confused about their identity and can sometimes assume a new identity

Dissociative Identity Disorder (DID)

- Two or more personalities that recurrently take control of a person's behavior.
- Results when the components of identity fail to integrate
- Most often involved with children who have been subject to sexual or physical abuse
- Personalities can sometimes be integrated into one after much therapy.

Depersonalization/Derealization Disorder

- Depersonalization: Individuals feel detached from their own mind and body
- Derealization: Same as above, but individual feels detached from their surroundings
- Individual will have a feeling of automation and may fail to recognize their own reflection.
- Depersonalization can be described as an out-of-body experience, while Derealization is described as a dream-like world
    - Can experience the two simultaneously
- Both cause significant impairment of regular activities, but individual does no display psychotic symptoms (like delusions or hallucinations)

Somatic Symptoms and Related Disorders

Somatic Symptom Disorder

- Individuals with that have at least one somatic (bodily) symptom that may or may not be linked to an underlying medical condition.
    - This symptom is accompanied by disproportionate concerns about its seriousness, devotion of an excessive amount of time and energy to it, or elevated levels of anxiety.

Illness Anxiety Disorder

- Characterized by being consumed with thoughts about having or developing a serious medical condition
- Individuals with this disorder are quick to become alarmed about their health
    - Either excessively check themselves for signs of illness or avoid medical appointments all together.

Conversion disorder

- Characterized by unexplained symptoms affecting voluntary motor or sensory functions
- Symptoms typically begin after the individual experiences high levels of stress or a traumatic event.

    - E.g. – paralysis or blindness that are not attributed to neurological damage
- **La belle indifference:** person is unconcerned by the symptom. Patients with this disorder may experience this indifference.
- Sometimes the symptoms that are seen in the conversion disorder may sometimes be connected with the inciting event in a literal or poetic way.
    - E.g. – women goes blind shortly after watching her son die tragically

Personality Disorders

- Personality Disorder: pattern of behavior that is inflexible and maladaptive
    - Causes distress or impaired functioning of at least two of the following:
        - Cognition
        - Emotions
        - Interpersonal functioning
        - Impulse control
    - Considered **ego-syntonic:** individual perceives their behavior as correct, normal or in harmony with their goals.
        - Other disorders are **ego-dystonic:** individual sees the illness as something that is thrust upon them and is intrusive/bothersome.

Cluster A (Paranoid, Schizotypal, and Schizoid Personality Disorders)

- This cluster is marked by disorders that all have behaviors which are labeled as odd or eccentric by others.
- Paranoid personality disorder: marked by a pervasive distrust of others
    - Patients may be in prodromal phase of schizophrenia and are termed premorbid.
- Schizotypal Personality disorder: pattern of odd or eccentric thinking
    - Individuals have **ideas of reference** (like a less extreme delusion of reference) & **magical thinking** (e.g. – superstitousness or a belief in clairvoyance (psychic)
- Schizoid Personality Disorder: pervasive pattern of detachment from social relationships and a restricted range of emotional expression
    - Individuals show little desire for social interaction – have few, if any, close friends; and have poor social skills

Cluster B (Antisocial, Borderline, Histrionic, and Narcissistic Personality Disorders)

- These disorders are marked by behavior that is labelled as dramatic, emotional or erratic by others
- Antisocial Personality Disorder: pattern of disregard for and violations of the rights of others.
    - Three times more common in males than in females
    - Evidenced by repeated illegal acts, deceitfulness, aggressiveness, and a lack of remorse
    - Many serial killers and prisoners have this type of disorder
- Borderline Personality Disorder: pervasive instability in interpersonal behavior, mood, and self-image.
    - Two times more common in females than in males
    - Have intense and unstable interpersonal relationships

    - Profound identity disturbance: uncertainty about self-image, sexual identity, long-term goals, or values.
    - Intense fear of abandonment
    - May use **splitting** as a defense mechanism: view others as all good or all evil.
    - Common to have suicide attempts or self-mutilation
- Historic Personality Disorder: constant attention seeking behavior
    - Individuals wear colorful clothing, are dramatic, and are exceptionally extroverted. May also use seductive behavior to gain attention
- Narcissistic Personality disorder: person has a grandiose sense of self-importance and uniqueness, preoccupation with fantasies of success, a need for constant admiration and attention, and characteristic disturbances in interpersonal relation (feelings of entitlement)
    - Have very fragile self-esteems and are constantly concerned with how others view them
    - Marked by feelings of rage, inferiority, shame, humiliation or emptiness when these individuals are not viewed favorably by others.

Cluster C (avoidant, dependent, and obsessive-compulsive personality disorders)

- All are marked by behaviors that are labeled as anxious or fearful
- Avoidant: affected individual has extreme shyness and fear of rejection.
    - Individual sees themselves as socially inept and is often socially isolated.
    - Have an intense desire for social affection and acceptance
    - Tend to stay in the same jobs, life situations and relationships even if they want change
- Dependent: continuous need for reassurance
    - Individuals tend to remain dependent on one specific person to take actions and make decisions
- Obsessive-Compulsive personality disorder (OCPD): individual is perfectionistic and inflexible, tends to like rules and order.
    - E.g. - Inability to discard worn-out objects, lack of desire to change, excessive stubbornness, lack of a sense of humor, and maintenance of careful routines.
    - Different from OCD, which is focal and acquired. OCPD is lifelong and also ego-syntonic.

Biological Basis of Nervous System Disorders

Schizophrenia

- Most probable cause is due to genetics, but trauma at birth (especially hypoxemia – low O_2 concentrations) is also considered a risk factor.
- Excessive marijuana use in adolescence is associated with a higher risk
- May be partially inherited. If a person has schizophrenia, the risk that their first degree relative will have this disorder is 10x more.
- Schizophrenia is highly associated with an excess of dopamine in the brain
    - May also be associated with structural changes in the brain

- **Neuroleptics:** medication used to treat schizophrenia that act to block dopamine receptors.
    - **Neuroleptic (antipsychotic)** name comes from the side effects of these drugs. Which induces sedation.

Depressive and Bipolar Disorders

- Markers associated with depression:
    - High glucose metabolism in the amygdala
    - Hippocampal atrophy after a long duration of illness
    - Abnormally high levels of glucocorticoids (cortisol)
    - Decreased norepinephrine, serotonin, and dopamine (monoamine theory of depression)
- Both the neurotransmitters and their metabolites are decreased.
    - I.e. – their actual production is decreased
- Markers associated with bipolar disorder:
    - Increased norepinephrine and serotonin
    - Higher risk if parent has bipolar disorder
    - Higher risk for persons with multiple sclerosis

Alzheimer's Disease

- Type of dementia that is characterized by gradual memory loss, disorientation in time and place, problems with abstract thought, and a tendency to misplace things.
- Later stages are associated with changes in mood or behavior, changes in personality, difficulty with procedural memory, poor judgment, and loss of initiative
- This disease is most prominent in patients older than 65 and women are at a greater risk
- Family history is a significant risk factor and there is a lower risk level associated with higher levels of education.

Genetic Component

- ***Presenilin*** gene on chromosome 1 and 14 contribute to having the disease
- ***Apolipoprotein E gene*** mutations on chromosome 19 can alter the likelihood of acquiring this disease.
- β-***amyloid precursor protein*** gene on chromosome 21 contributes to a higher risk
    - Individuals with down syndrome are at a much higher risk of Alzheimer's

Biological Factors

- Diffuse atrophy of the brain on a CT or MRI
- Flattened sulci in the cerebral cortex
- Enlarged Cerebral ventricles
- Deficient blood flow in parietal lobes. This is correlated with cognitive decline
- Reduction in the levels of acetylcholine
- Reduction in choline acetyltransferase (ChAT). Enzyme that produces ACh
- Reduced metabolism in temporal and parietal lobes
- Senile plaques of **β-amyloid** (misfolded protein in beta-pleated sheet form)
- Neurofibrillary tangles of hyperphosphorylated tau protein

Parkinson's Disease

- Characterized by:
  - **Bradykinesia:** slowness in movement
  - **Resting tremor:** a tremor that appears when muscles are not being used
  - **Pill-rolling tremor:** flexing and extending the fingers while moving the thumb back and forth. As if something is rolling in the fingers.
  - **Masklike facies:** facial expression consisting of static and expressionless facial features. E.g. – staring eyes and a partially open mouth.
  - **Cogwheel Rigidity:** muscle tension that intermittently halts movement as an examiner attempts to move a limb
  - **Shuffling Gait:** stooped posture
- Dementia and depression are also commonly associated with Parkinson's
- Biological basis is decreased dopamine production in the **substantia nigra**
  - **Substantia nigra:** layer of cells in the brain that functions to produce dopamine
    - Dopamine permits the proper functioning of the **basal ganglia**
  - **Basal Ganglia:** critical for initiating and terminating movements, also sustains repetitive motor tasks and smoothening motions
- **L-DOPA:** is a precursor that can be converted to dopamine once in the brain.
  - Parkinson's can be partially treated by this.