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Psych

Understanding Anxiety and Depression

Objectives

- What is Anxiety?
- What is Depression?
 - Review what it means to have anxiety/depression, what kinds of anxiety/depression disorders there are, and where do they come from?
 - How do we treat them?
- Discuss a little bit about how addiction or substance use are related to anxiety/depression throughout the talk

What is Anxiety?

- Definitions
- Casual
 - Distress or uneasiness of mind caused by fear of danger or misfortune
- Formal/medical
 - An emotion characterized by feelings of **tension**, **worried** thoughts, and physical changes like increased blood pressure or heart rate.
 - NOT the same as fear, but they are often used interchangeably.



How do Anxiety Disorders develop?

- Many psychological theories
 - How we think, believe, and perceive our experiences, environment, and ourselves
 - Psychodynamic- anxiety as a signal of the presence of danger in the unconscious
 - Behavioral- Anxiety is a conditioned response to a specific environmental stimulus.
- Biological causes/risk factors

Neurochemical Processes

- Autonomic nervous system
 - Specifically, the sympathetic nervous system which dictates our **fight or flight** response
- Neurotransmitters
 - **Norepinephrine** plays a major role in the flight or fight response and is released during times of stress
 - **Serotonin-** Decreased serotonin is thought to play a role in anxiety disorders

Neurochemical Processes

- GABA
 - responsible for slowing activity in the brain by blocking certain signals in the central nervous system
- Hormonal Processes
 - Cortisol
 - Corticotropin

DSM-5 DIAGNOSTIC CRITERIA FOR GENERALIZED ANXIETY DISORDER

Criteria

1. Excessive anxiety and worry (apprehensive expectation), occurring more days than not for at least 6 months, about a number of events or activities.
2. The individual finds it difficult to control the worry.
3. The anxiety and worry are associated with three (or more) of the following six symptoms (with at least some symptoms having been present for more days than not for the past 6 months):
 - a. Restlessness, feeling keyed up or on edge
 - b. Being easily fatigued
 - c. Difficulty concentrating or mind going blank
 - d. Irritability
 - e. Muscle tension
 - f. Sleep disturbances (difficulty falling or staying asleep, or restless, unsatisfying sleep)
4. The anxiety, worry, or physical symptoms cause significant distress or impairment in social, occupational, or other areas of functioning.
5. The disturbance is not attributable to the physiological effects of a substance or another medical condition.
6. The disturbance is not explained by another mental disorder.

Generalized Anxiety Disorder (GAD) Symptoms



- Onset typically in late adolescence to early adulthood
- 2:1 Female to Male prevalence
- 50-90% have another psychiatric condition
- Many report being anxious for “as long as they can remember”
- Negative life events usually associated with onset

Generalized Anxiety Disorder

How do we treat GAD?

- Treatment of GAD and other ADs are similar, with some slight variations depending on the AD
- Psychotherapy
 - Particularly useful for people motivated to understand their anxiety and are psychologically minded
 - Cognitive Behavioral Therapy (CBT)
 - Psychodynamic
 - Exposure



Medications for Anxiety Disorders

- Work by targeting one or several of NTs serotonin, norepinephrine, GABA
- Selective Serotonin Reuptake Inhibitors (SSRIs)
 - First line medication
 - Fluoxetine (Prozac), Sertraline (Zoloft), escitalopram (Lexapro)
- Selective Serotonin and Norepinephrine Reuptake Inhibitors
 - Include medications such as venlafaxine (Effexor) and duloxetine (Cymbalta)
- Advantages of SSRI/SNRIs
- Disadvantages of SSRI/SNRIs

Benzodiazepines

- Examples include medications such as:
 - lorazepam (Ativan)
 - clonazepam (Klonopin)
 - alprazolam (Xanax)
 - diazepam (Valium)
- Usually reserved for short term use only, such as when SSRI needs to take effect, for breakthrough symptoms, or rare/occasional panic attacks

What is Depression?

- Definitions
- Casual:
 - A mental state characterized by negative, or pessimistic, sense/feeling of inadequacy and a despondent lack of activity
- Medical:
 - A mood disorder causing persistent feelings of sadness, loss of interest, affecting how one feels, thinks, and behaves. It can lead to a variety of emotional and physical problems, difficulties with normal day-to-day activities. Sometimes accompanied by a feeling that life isn't worth living



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What causes Depression?

- Similar risk factors and causes as anxiety disorders
- Psychosocial stressors
 - Stressful events often precede the first depressive episode
 - Stress may lead to long-lasting changes in brain
 - Personality

What causes Depression?

- Psychodynamic- Most of these theories deal with childhood and parent-child dynamics
 - Loss and self-directed anger
 - Incongruity between ideals and reality
 - Unmet needs
- Cognitive- results when specific cognitive distortions (or thought patterns/processes) present in someone susceptible to depression
 - Negative, unhealthy thoughts form and are the basis of the emotions felt
- Learned Helplessness
 - Depression as the result of uncontrollable events
 - Internal causal explanations are thought to produce loss of self esteem after experiencing some stressor(s)

What causes Depression?

Biological causes

- Neurotransmitters similar to Anxiety
 - Specifically, norepinephrine, serotonin, and dopamine
 - Dopamine- affects pleasure, satisfaction, and motivation
- Hormones
 - Stress hormones as discussed with anxiety disorders
 - Thyroid Hormones
- Brain Structure/Genetics

Major Depressive Disorder

Diagnostic Criteria

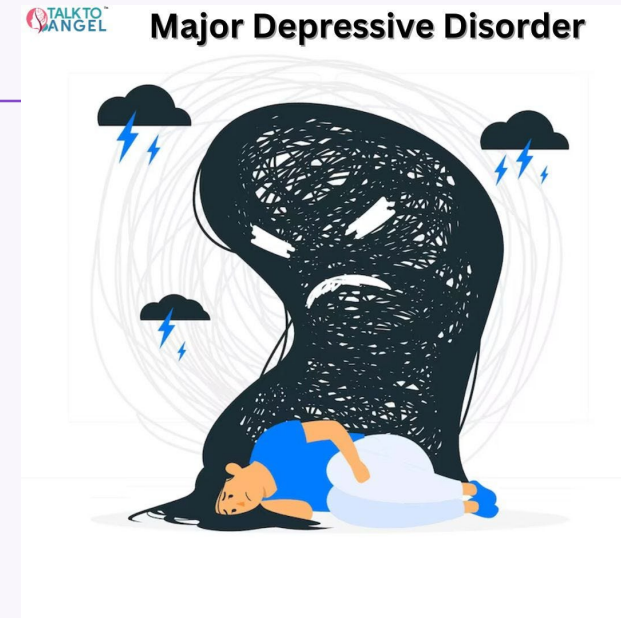
A. Five (or more) of the following symptoms have been present during the same 2-week period and represent a change from previous functioning; at least one of the symptoms is either (1) depressed mood or (2) loss of interest or pleasure.

Note: Do not include symptoms that are clearly attributable to another medical condition.

1. Depressed mood most of the day, nearly every day, as indicated by either subjective report (e.g., feels sad, empty, hopeless) or observation made by others (e.g., appears tearful). (**Note:** In children and adolescents, can be irritable mood.)
2. Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day (as indicated by either subjective account or observation).
3. Significant weight loss when not dieting or weight gain (e.g., a change of more than 5% of body weight in a month), or decrease or increase in appetite nearly every day. (**Note:** In children, consider failure to make expected weight gain.)
4. Insomnia or hypersomnia nearly every day.
5. Psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down).
6. Fatigue or loss of energy nearly every day.
7. Feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick).
8. Diminished ability to think or concentrate, or indecisiveness, nearly every day (either by subjective account or as observed by others).
9. Recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide.

Major Depressive Disorder

- 2:1 Female to Male prevalence
- Mean age of onset is ~40 years
- About half develop between 20 and 50
- Can still occur in childhood and old age
- Increasing rates in people younger than 20 years old
- More common among those without close interpersonal relationships, or are divorced/separated
- Commonly co-occurs with alcohol abuse, obsessive-compulsive disorder, and social anxiety disorder

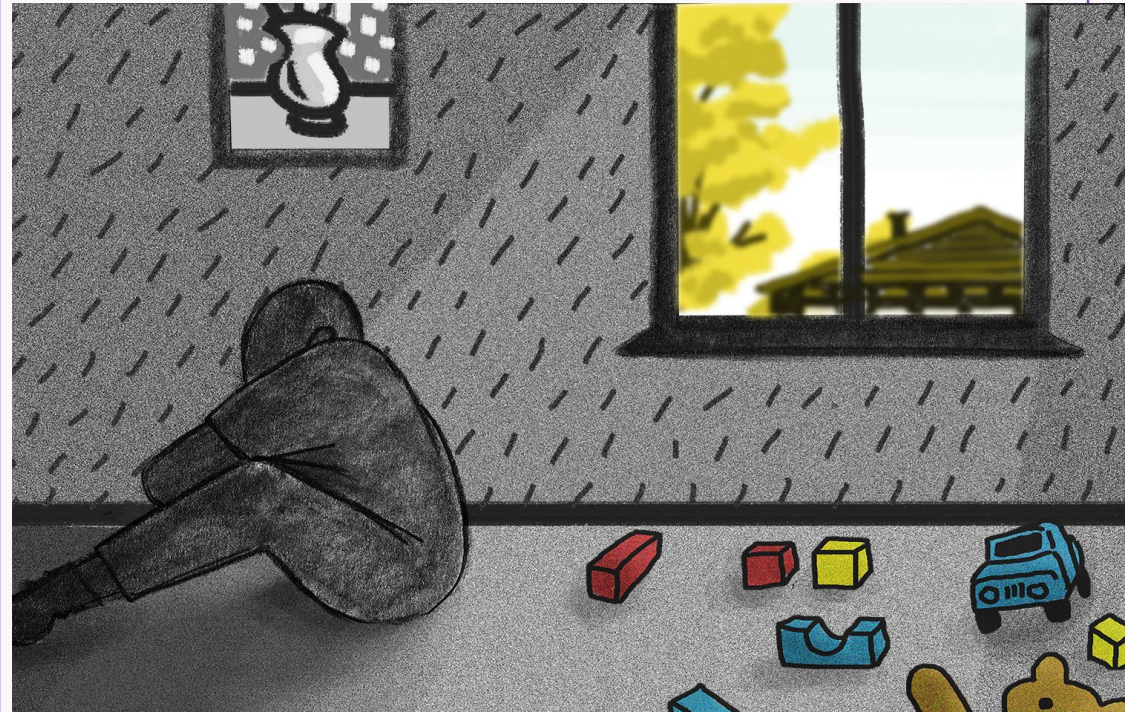


Course and Prognosis

- About 50% had significant symptoms prior to first MD episode
- Early identification may prevent development of full depressive episode
- Later onset of disorder associated with absence of family history of mood disorders, or with antisocial personality disorder, or alcohol abuse
- At least 2 weeks for it to count as an episode, but generally lasts 6-13 months
- Generally chronic with relapses
- May have more frequent, longer episodes over time, with less time between episodes
- Severity affects recovery

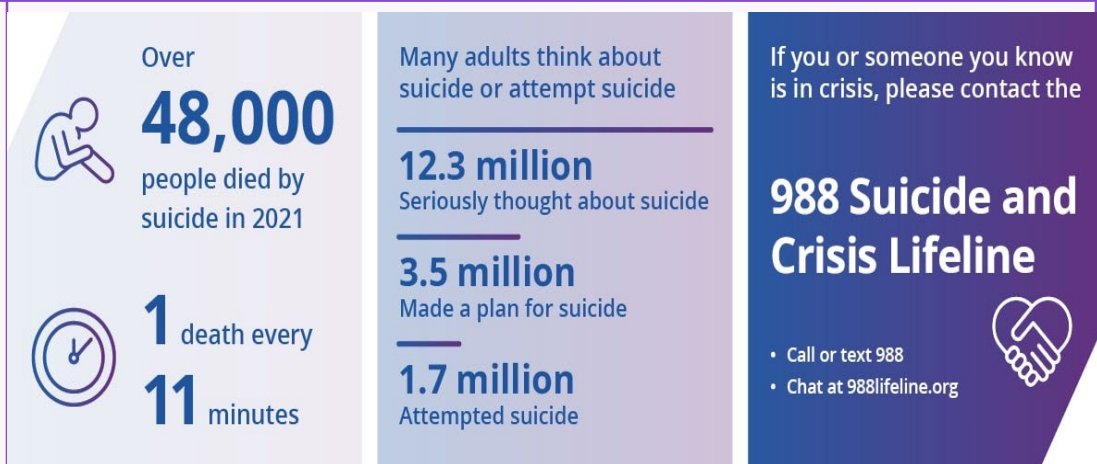
Child and Adolescent MDD

- DSM V criteria lists irritable mood as a primary symptom that can be present instead of depressed mood
- Restlessness, aggression, daily sleep and fatigue complaints, antisocial behavior
- Problems with school, relationships, and substance use are common
- Often chronic if developed in childhood, and may be more severe



Suicide

- A leading cause of death in the US
- Currently 11th leading cause per CDC
 - 9th leading cause in ages 10-64, 2nd in ages 10-14 and 20-34
- About 95% of those who die by suicide have a mental illness
 - Depressive disorders account for about 80%
- Rates increased by about 36% between 2000-2021



- Risk Factors:
 - Age, Gender, Race, Religion
 - Substance use, personality disorders
 - Social support, occupation, previous attempts

How do we treat depressive disorders?

- Talk therapy
 - Cognitive-Behavioral Therapy
 - Psychodynamic Therapy
 - Interpersonal Therapy
- Medications
 - SSRI/SNRIs
 - Bupropion (dopamine, norepinephrine), mirtazapine (alpha-2-adrenergic receptors, serotonin, norepinephrine)
 - TCAs, MAOIs

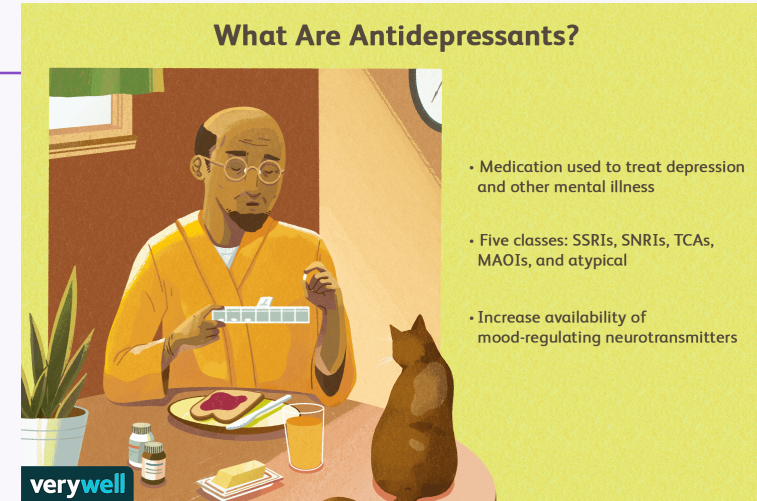


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Other Treatments

- Electroconvulsive Therapy (ECT)



- Short, controlled generalized tonic-clonic seizure is induced
- Most effective treatment for MDD
- For those who cannot tolerate or failed medications/other treatments
- Patients commonly experience HAs, soreness, amnesia, confusion

- Transcranial Magnetic Stimulation (TMS)

- Short pulses of magnetic energy to stimulate neurons in the brain
- Nonconvulsive, no anesthesia, safe side effect profile, not associated with cognitive side effects

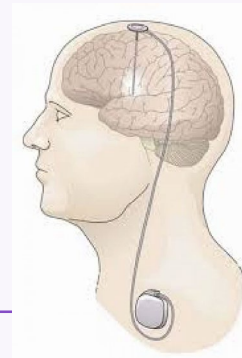


- Vagus Nerve Stimulation

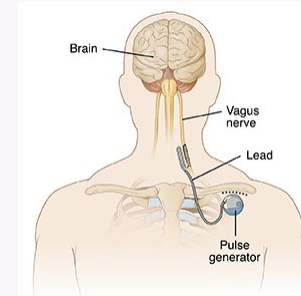
- Experimental stimulation in epilepsy treatments found improvements in mood
- Left VNS with pacemaker-like device
- Approved for treatment resistant depression

- Deep Brain Stimulation

- Implantation of medical device which sends electrical impulses to the brain
- Has provided benefits for those with other neurological conditions like PD, dystonia, chronic



and tremors



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Questions?

