

WORKSHEET Core 1, Slides 9-11: Knowledge Check: Use Misuse, or Use Disorder

Purpose – To assess understanding about the differences between substance use, misuse, and use disorders.

Total Time – 10 minutes

Read the following questions and choose the term that best describes the person's behavior.

1. A 16-year old teenager has a bad cold with a soupy-sounding cough. Lucy, her best friend, feels sorry for her and gives her a dose of prescription cough medicine with codeine. The medicine helps a lot and her coughing subsides.
 - a. Substance use
 - b. Substance misuse**
 - c. Substance use disorder
2. An 18-year old takes a prescription antidepressant for treatment of depression. As directed by his doctor, the 18-year old takes this medication once a day.
 - a. Substance use**
 - b. Substance misuse
 - c. Substance use disorder
3. A 17-year old teenager smokes a blunt each night and e-vapes at least two dabs of budder each day. He decided to stop using and experienced irritability, anxiety, depression, sweatiness, and headache about a week later.
 - a. Substance use
 - b. Substance misuse
 - c. Substance use disorder**
4. A teenager gets into a major car accident after a night of using N-Bomb with his friends. His car was totaled, but fortunately, no one was seriously hurt.
 - a. Substance use
 - b. Substance misuse**
 - c. Substance use disorder
5. The doctor prescribed a muscle relaxant for Toby after a soccer injury that severely strained his neck and left shoulder. Toby takes the medicine as prescribed twice a day and says that it makes him sleepy. Today, while driving to school, Toby was stopped for failure to render right of way to a teen in a crosswalk. After talking to Toby, the police told him to step out of his car. Toby admitted that he'd taken a muscle relaxant, but insisted that it was prescribed. He was arrested anyway and charged with DUI.
 - a. Substance use
 - b. Substance misuse**
 - c. Substance use disorder

INFORMATION SHEET:

HOW WE DEFINE SUBSTANCE USE, MISUSE, AND DEPENDENCE

Substance Use

Substance use is the consumption of low and/or infrequent doses of alcohol and other drugs such that damaging consequences may be rare or minor. Substance use might include an occasional glass of wine or beer with dinner, or the legal use of prescription medication as directed by a doctor to relieve pain or to treat a behavioral health disorder.

Substance Misuse

Substance misuse is the use of a substance for a purpose not consistent with legal or medical guidelines. This term often describes the use of a prescription drug in a way that varies from the medical direction, such as taking more than the prescribed amount of a drug or using someone else's prescribed drug for medical or recreational use.

Substance-Related Addictive Disorders

American Psychiatric Association. (2013). Substance-Related and Addictive Disorders in the *Diagnostic and statistical manual of mental disorders*: (5th ed.). pp. 481-589.

Substance Use Disorder

Per the American Psychiatric Association's Diagnostic and Statistical Manual, 5th Edition (DSM-5), substance-related disorders cover "10 separate classes of drugs: alcohol; caffeine; cannabis; hallucinogens...; inhalants; opioids; sedatives, hypnotics, and anxiolytics; stimulants...; tobacco; and other...substances (p. 481). Substance-related disorders are further classified into Substance-Induced Disorders and Substance Use Disorders. Substance-induced disorders include reversible substance-specific symptoms of "intoxication, withdrawal, and other substance/medication-induced mental disorders" (p. 485). Gambling Disorder is an addictive disorder also included in the DSM-5, because gambling behaviors activate the brain's reward centers in similar fashion as substance of abuse.

Substance use disorder is "a cluster of cognitive, behavioral, and physiological symptoms indicating that the individual continues using the substance despite significant substance-related problems" (American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders, 5th Ed., 2013, p. 483). Characteristics of substance use disorders include a pattern of behaviors fitting into one of four criteria groups: impaired control, social impairment, risky use, and pharmacological criteria. Specific criteria include (pp. 483-484):

Criterion 1: Impaired Control

1. The individual may take the substance in larger amounts or over a longer period than was originally intended.
2. The individual may express a persistent desire to cut down or regulate substance use and may report multiple unsuccessful efforts to decrease or discontinue use
3. The individual may spend a great deal of time obtaining the substance, using the substance, or recovering from its effects
4. Craving is manifested by an intense desire or urge for the drug that may occur at any time, but is more likely when in an environment where the drug previously was obtained or used.

Criterion 2: Social Impairment

5. Recurrent substance use may result in a failure to fulfill major role obligations at work, school or home.
6. The individual may continue substance use despite having persistent or recurrent social or interpersonal problems, caused or exacerbated by the effects of the substance.
7. Important social, occupational, or recreational activities may be given up or reduced because of substance use.

Criterion 3: Risky Use

8. Recurrent substance use in situations in which it is physically hazardous
9. The individual may continue use despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance.

Criterion 4: Pharmacological Criteria

10. Tolerance by requiring a markedly increased dose of the substance to achieve the desired effect or markedly reduced effect when the usual dose is consumed.
11. Withdrawal occurs when the blood or tissue concentration of a substance declines in an individual who had maintained prolonged heavy use of the substance.

Substance Use Disorder is classified by a **range of severity** based on the number of diagnostic criteria endorsed. Mild Substance Use Disorder means that the individual meets two to three of the symptoms. Moderate Substance Use Disorder means that four to five symptoms have been endorsed. Finally, Severe Substance Use Disorder means that the individual displays six or more of the diagnostic symptoms.

Webinar 8/22 Reflection Sheet

Consider what you have learned about teen brains and answer the following:

1. How does Dopamine play a part in drug abuse?

Dopamine is a neurotransmitter that is responsible for motivation (through activation of the nucleus Accumbens) and that helps us to remember how and where we obtained the source of pleasure (e.g., drug, sex, food, etc.). We call this the “reward” or “survival” chemical in our brains.

2. Why are teen brains be more vulnerable to drug use?

Teen brains are not yet fully developed with much of the Prefrontal Cortex still not myelinated. Full myelination doesn't occur until the individual is between 25-28 years of age. This lack of myelination means that communication with the prefrontal cortex is slightly slower than communication through the temporal lobes. Therefore, when under stress, teens may be more likely to make emotionally-based decisions

Teen brains go through massive neuron growth between ages 12-14. One aspect of this growth is that teens develop abstract reasoning and are more acutely aware of and influenced by peer pressure.

Teens are feeling some emotions for the first time (e.g., puppy love) and these feelings are experienced much more intensely.

3. What do we mean when we say that drugs have hijacked the brain?

The Nucleus Accumbens (NAcc) is our brain's motivating center to increase behavior that the brain believes is important for survival. For example, the NAcc fires to motivate us to eat, have sex, etc. (which we feel as an urge or a craving), and then sends a signal to the Prefrontal Cortex (PFC) to 'encourage' us to complete the behavior. Once the behavior is done (or if the behavior could be harmful), the PFC sends a signal back to the NAcc to stop its signaling (and stop the craving). When a person becomes physiologically dependent on a drug, the NAcc sends a signal to stop the “quit” signal from the PFC. The drug has “hijacked” our brain by shutting down the PFC to force us to complete the drug-seeking/taking behavior.