Clinical Considerations for Gambling Comorbidity

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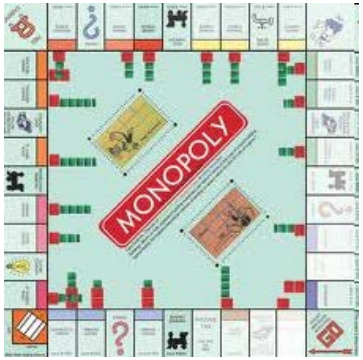
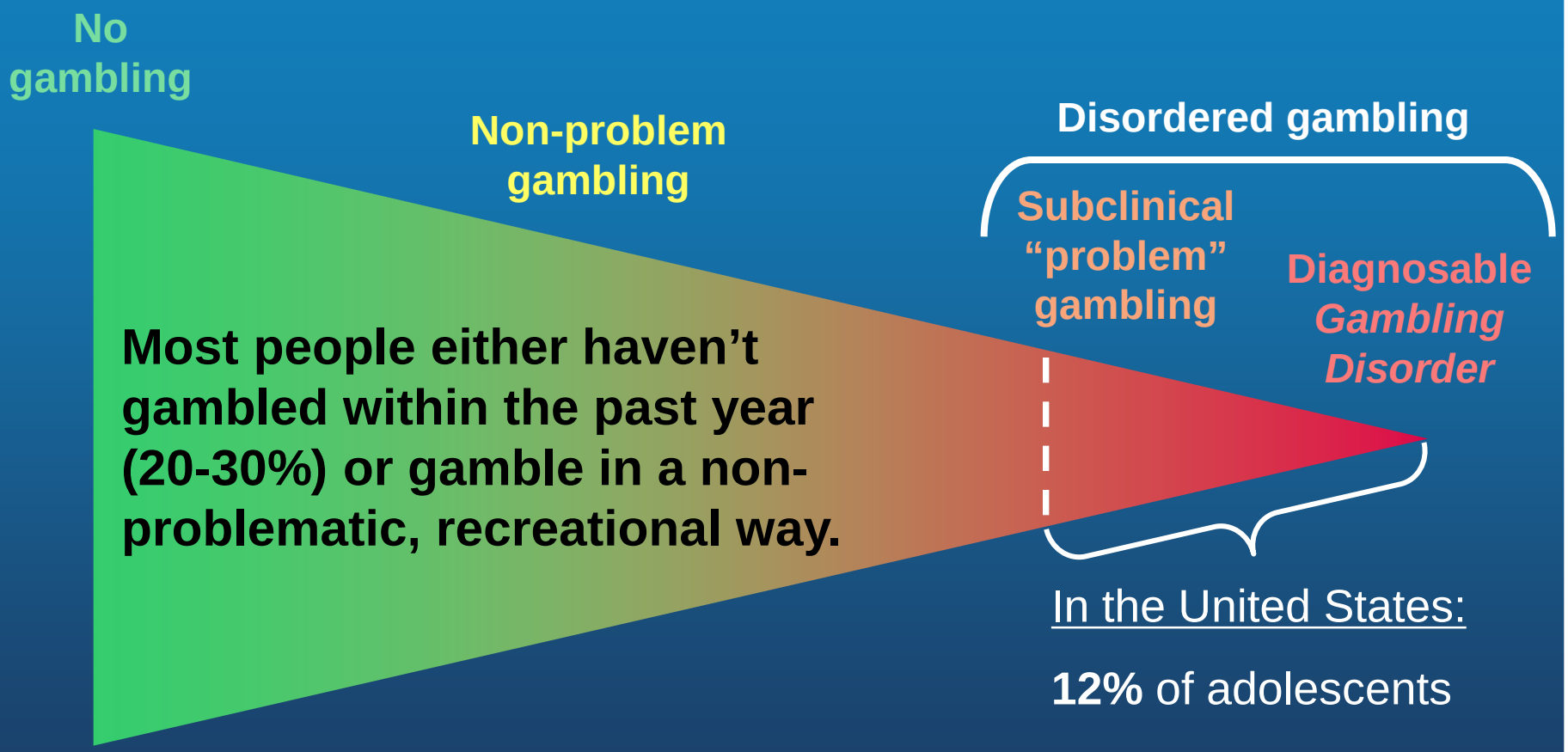
Overview/Goals

- Increase knowledge of the comorbidity and co-occurrence of gambling, substance use, and other mental health symptoms and disorders.
- Discuss functional analysis as a means to understand how different behaviors/disorders impact one another and then modify behavior.
- Discuss how to prioritize treatment targets when comorbidity/co-occurrence is present.
- Increase self-confidence to treat co-occurring behaviors and comorbid disorders within individual therapy practice.

By age 18, >80% of people have gambled at least once, placing their first bet around age 13 on average.



Continuum of gambling behavior



In the United States:

12% of adolescents

16% of college students

6% of adults

Personal Costs of Gambling

- Financial hardships
- Work/academic problems
- Relationship problems
- Legal involvement
- Substance abuse
- Depression, anxiety, and suicidal ideation/completion

Social Costs of Gambling

2003: $54 billion

- Increased crime
- Lost work time
- Bankruptcies
- Bankruptcy
- Healthcare utilization

*Gross Gaming Revenue (profit after payouts); does NOT include ~$100 billion from ILLEGAL gambling

Cost to society per additional Problem Gambler: $ 3,222

Cost to society per additional Pathological Gambler: $10,330

Sources: US Census Compendia 2011; E.L. Grinols *Gambling in America: Costs and Benefits (2004)*

Risk factors for disordered gambling

- Age of first bet (≤ 11 years)
- Early big win?
- Biological sex (male)
- Family history of PG or SUDs
- Negative emotionality / poor coping
- Impulsive personality
- Anti-social personality
- Obsessive-compulsive disorder (OCD)
- Alcohol use / AUDs
- Illicit drug use / SUDs

DSM-IV Pathological Gambling & DSM-5 Gambling Disorder

① Preoccupation with gambling

② Behavioral tolerance

③ Unsuccessful control

④ Psychological withdrawal

⑤ Gambles to cope (*with distress*)

⑥ Chases losses (*long-term*)

⑦ Lies to conceal gambling

⑧ Illegal acts to fund gambling

⑨ Jeopardized/lost life role

⑩ Relies on others for $ bailout

PG[illegible]iagnosis re[illegible]es "pers[illegible]ent ar[illegible]ecurrent[illegible]bling beha[illegible]ior marked by 5 o[illegible] 10 sympto[illegible]ms."

DSM-5: 4 [illegible] 9 s[illegible]mptoms in a 12-month period

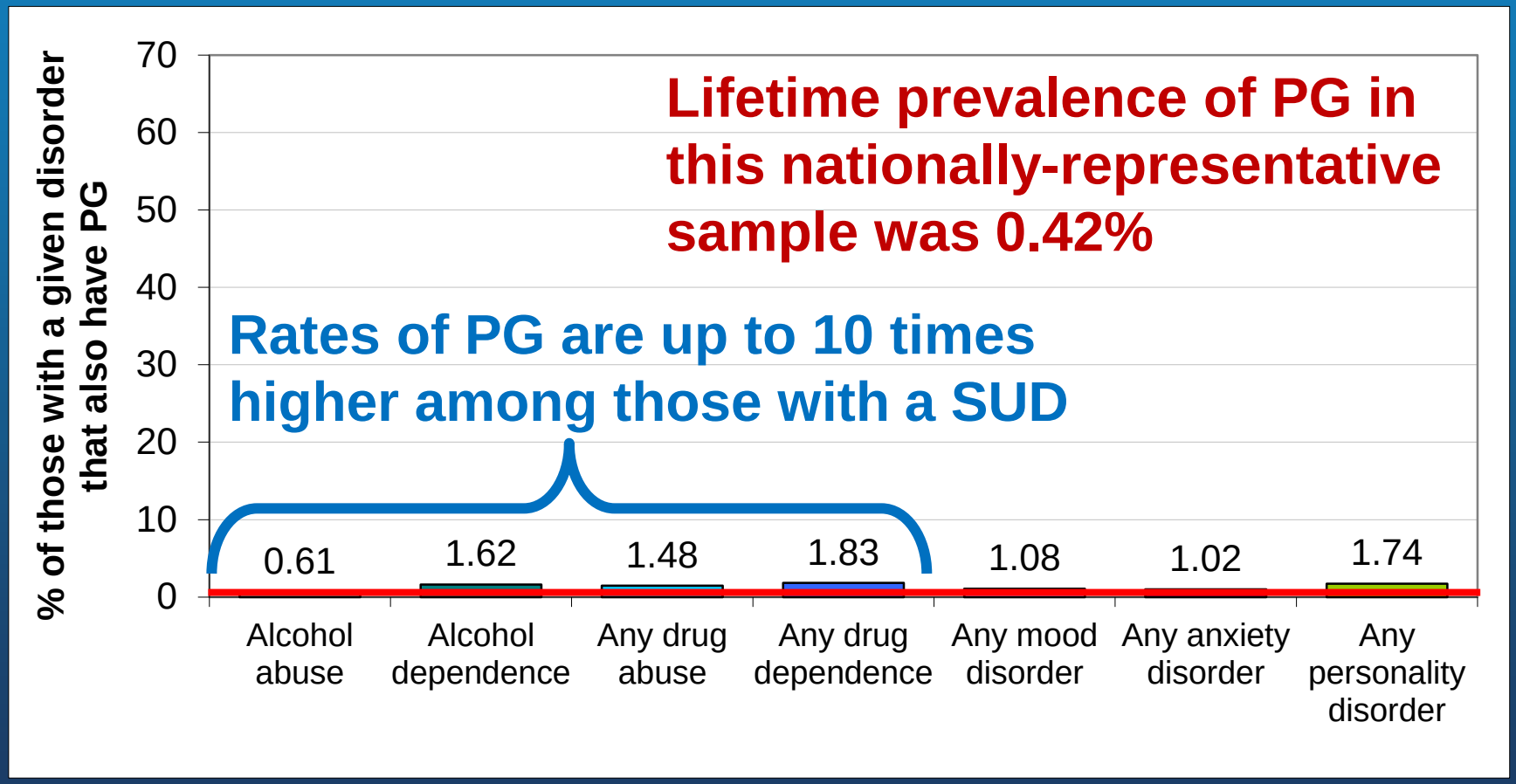
Classification of Gambling Disorder

	Pathological Gambling	Pathological Kleptomania	Pyromainia	Pyromainia
Preoccupation/time	X	X		
Tolerance	X	X		
Attempted control	X	X		
Withdrawal	X	X		
Engages to cope	X	X		
Chasing losses	X	X		
Lies about behavior	X	X		
Illegal acts to fund gambling	X	X		
Failed roles/responsibilities	X	X		
Bailout	X	X		
Continue knowing cost	X			
Larger amounts/time	X			
Failure to resist impulse		X	X	
Building tension before		X	X	X
Pleasure/relief after		X	X	X
Not for other purpose		X	X	X
Facination w/ behavior			X	X
Deliberate behavior			X	X

Comorbidity vs. Co-occurrence

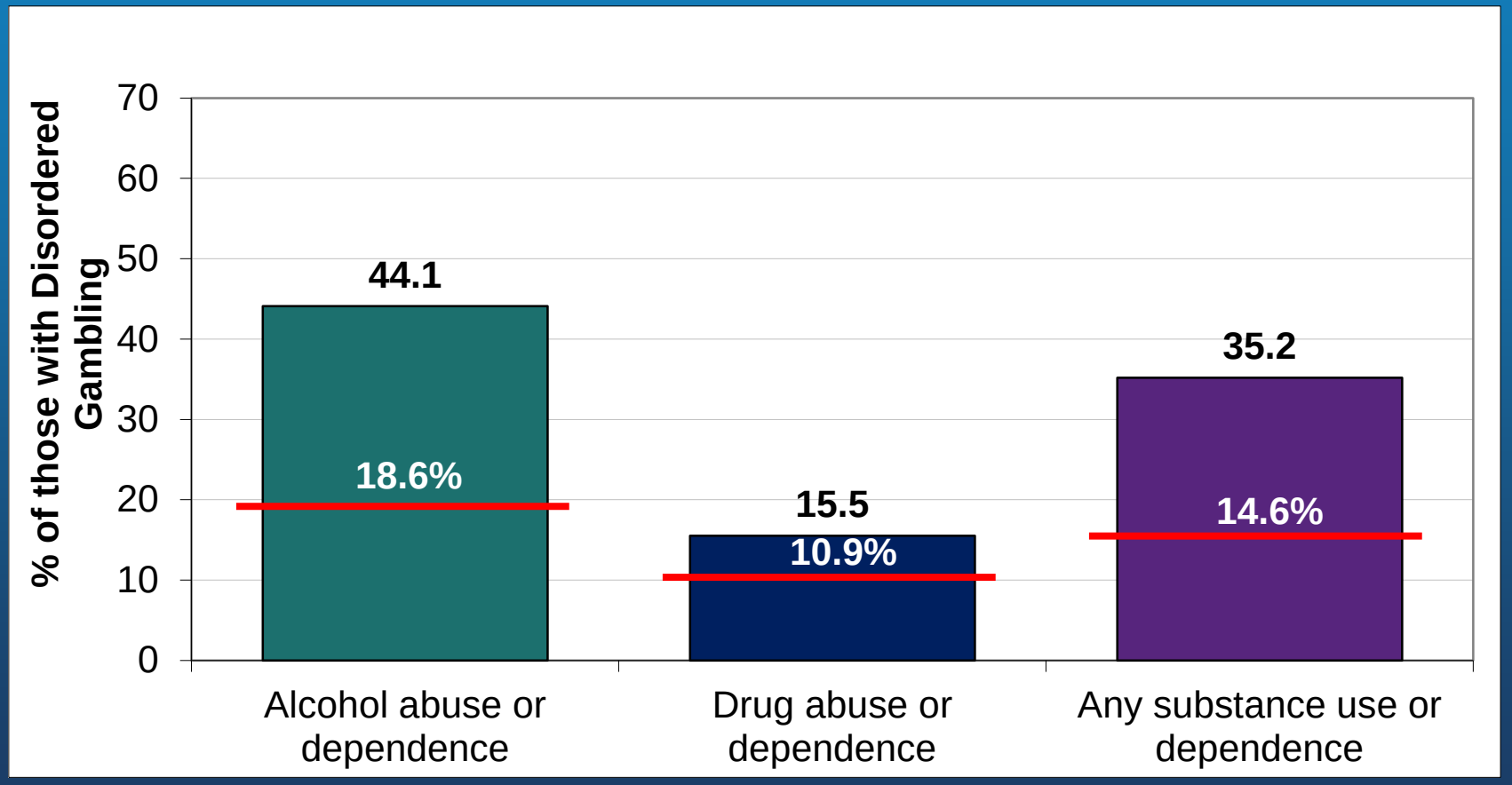
- *Comorbidity* refers to the positive association between two disorders (i.e., one tends to go with the other)
  - *Lifetime* comorbidity = disorders occur *independently* from one another at different points in a person's life
  - *Current* comorbidity = both disorders occur at the *same time*
- *Co-occurrence* refers to the simultaneous or proximal engagement in two or more behaviors
  - e.g., drinking while gambling; consuming caffeine and alcohol at the same time.
  - The total effect of the behaviors combined may result in greater harm than either alone.

Lifetime Comorbidity of PG *among those with Another Psychiatric Disorder*



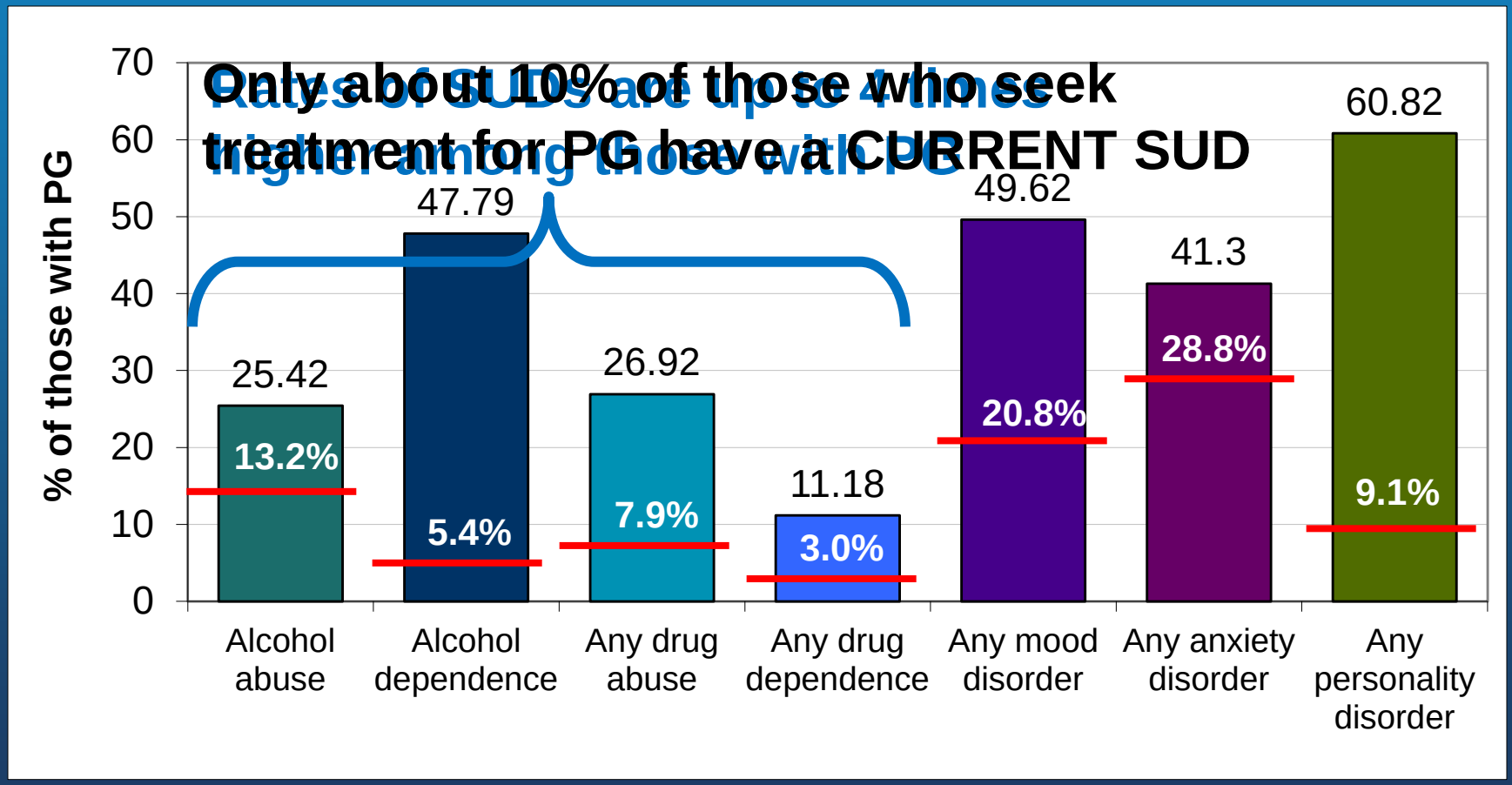
Source: Petry, 2005; Petry, Stinson & Grant (2005)

Lifetime Comorbidity of other disorders *among those with Disordered Gambling*



Sources: Feigelman et al. (1998); Cunningham-Williams et al. (1998); Kessler et al. (2005)

Lifetime Comorbidity of other psychiatric disorders *among those with PG*



Sources: Kessler et al. (2005); Lenzenweger et al (2007); Petry, 2005; Petry, Stinson & Grant (2005)

Those with even a *PAST* SUD tend to…

- Have experienced more years of gambling problems
- Gamble more frequently
- Experience greater psychiatric distress
- Above and beyond SUD treatment history, gender and age, **cigarette smoking is associated with**
  - Gambling more often & spending more money
  - Craving gambling more and having lower perceived control over gambling
  - Experiencing more psychiatric symptoms

Source: Petry & Oncken, (2002)

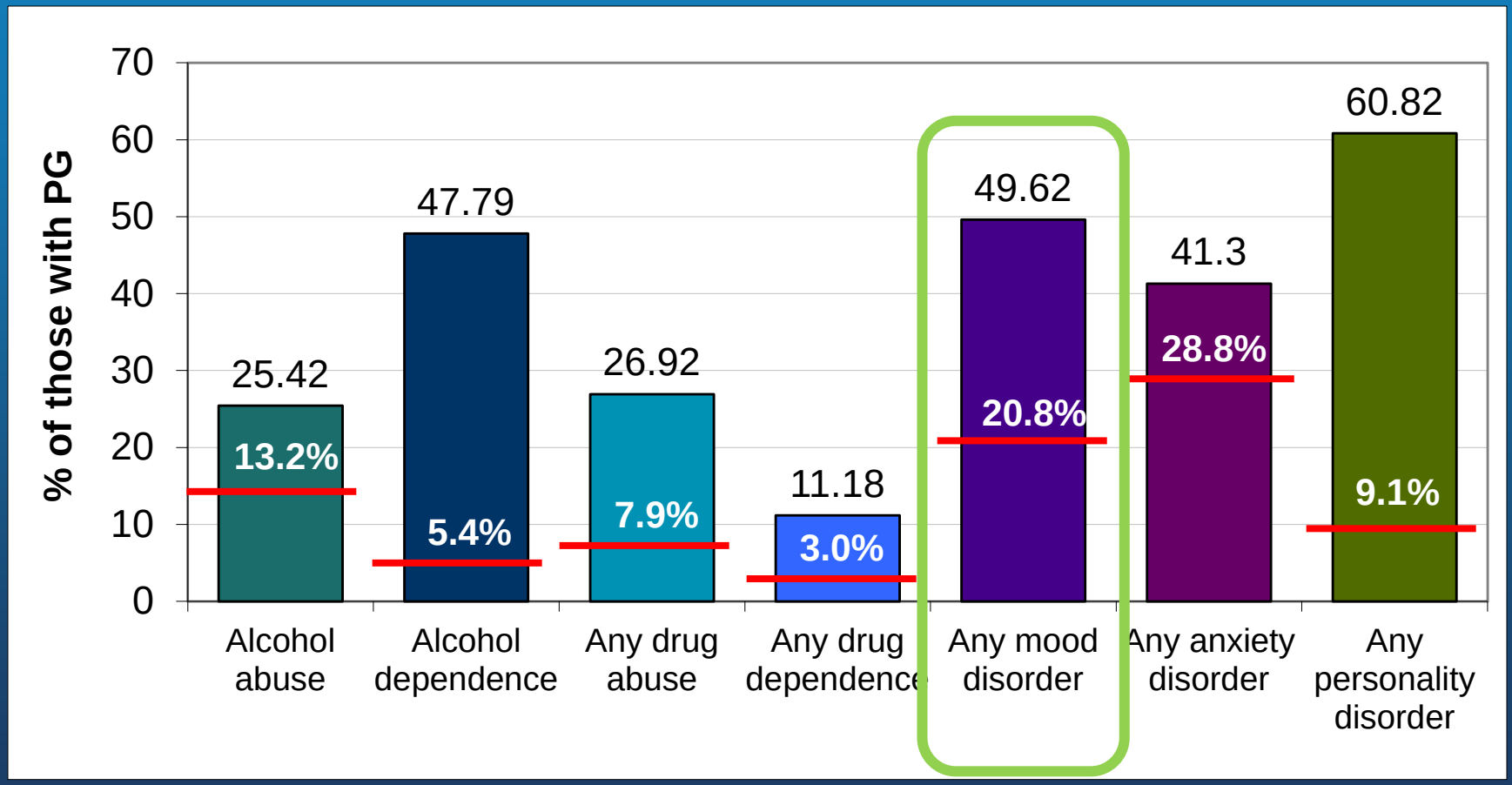
Individuals seeking treatment for SUD who also have PG…

- Report greater unemployment
- Have more legal problems/involvement
- Show greater social impairment/family problems
- Have greater prevalence of nicotine dependence
- Report more alcohol use
- Abuse more substances

* Gambling severity in these individuals also predicts engagement in high-risk sex

Source: Petry (2005)

Lifetime Comorbidity of other psychiatric disorders *among those with PG*



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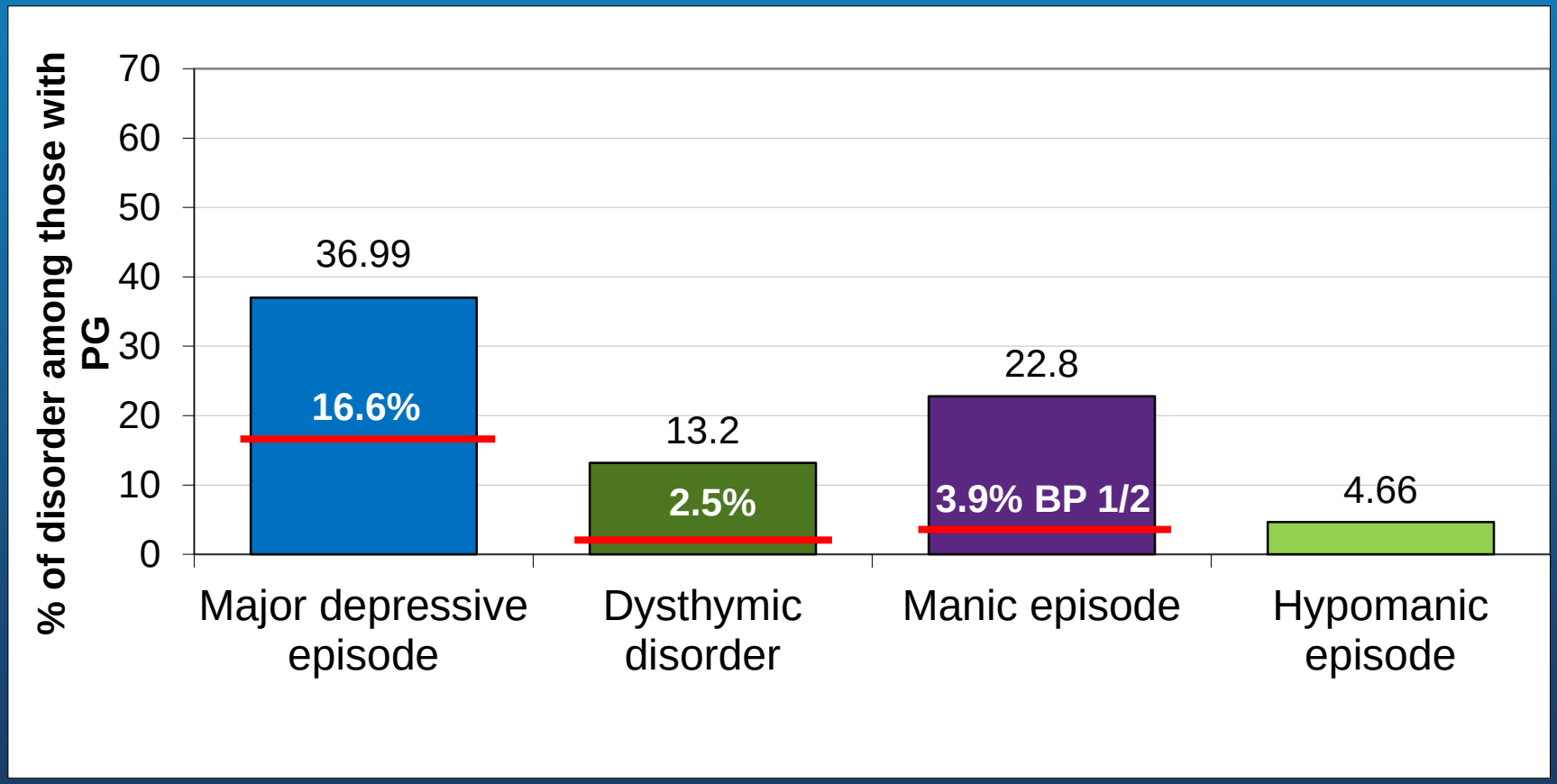
Lifetime Comorbidity of other psychiatric disorders *among those with PG*



Sources: Kessler et al. (2005); Lenzenweger et al (2007); Petry, 2005; Petry, Stinson & Grant (2005)

Suicidality among Disordered Gamblers

- Rates of suicidal ideation range from 12-92%
- Rates of suicide attempts range from 4-40%
- “Gambling-related” attempts range from 7-26%
- Among completed suicides, rates of “gambling-related” suicides range from 6% to 17% of total
  - Pathological gambling often not assessed as a contributing factor to death by suicide

How do we Explain the Discrepancies?

- Higher rates of suicide found in samples of:
  - Gamblers in treatment
  - Veterans
  - GA populations
  - Hotline callers
  - Certain geographic regions
- Lower rates found in population/epidemiological studies
- Different measures yield liberal or conservative estimates
- Definition of “gambling related” suicidality varies
- Individual differences in nature of the relationship

Does Disordered Gambling *Cause* Suicide?

- **Yes……No……Maybe**
  - Some studies show strong DG-suicide association
  - Many studies find *greater severity of gambling problems related to greater likelihood of suicidal ideation/attempts*
  - However, some studies show weak or no association
- Other studies indicate association may be accounted for by "common factors"
  - Depression, Substance Use, other psychiatric problems
  - Family history of addiction or psychiatric problems
- **Bottom line:** Depression and suicide common among disordered gamblers in treatment; problems related to gambling likely exacerbate mood problems and suicide risk

Suicide Risk Factors among Gamblers

- Financial problems
  - Credit **Debt**
  - **Debt** to Acquaintances
- Arrests/Legal Problems
- Gambling related family problems
- Depression and anxiety
- Substance Abuse
- Prior Mental Health or Substance Abuse Treatment
- Family history of Drug and/or Gambling Disorders
- Low SES (?)

Source: Ledgerwood et al. (2005)

Comorbidity-related Suicide Risk Factors

- Current MAJOR DEPRESSION plus…
  - Severe, GLOBAL INSOMNIA
  - Current Severe TURMOIL, ANXIETY, PANIC attacks, mood CYCLING (i.e., AGITATION)
  - Current Inability to CONCENTRATE, INDECISION
  - Current Severe ANHEDONIA
- PSYCHOSIS, voices telling client to commit suicide
- CURRENT SUBSTANCE USE, including ETOH and Rx meds (last 3 hours)

Co-occurring Behaviors

- Several college students (~35%) under the age of 21 report engaging in casino gambling in order to obtain alcohol more easily.
- About 25% of college students report frequently drinking alcohol when they gamble.
- Up to 75% of regular machine gamblers report drinking when they gamble.
- Trend toward gambling while high on marijuana, with cocaine use next most frequent.

Substance use exacerbates gambling

- Alcohol
  - Increases time spent gambling
  - Increases amount wagered
  - Increases consequences of gambling

- Marijuana
  - Impairs decision-making (focusing on larger immediate gains despite bigger losses)

How do mental health problems develop?

BIOLOGY

- Genetic liability
- Neuronal pathway development
- Synaptic functioning (release/uptake neurotransmitters)

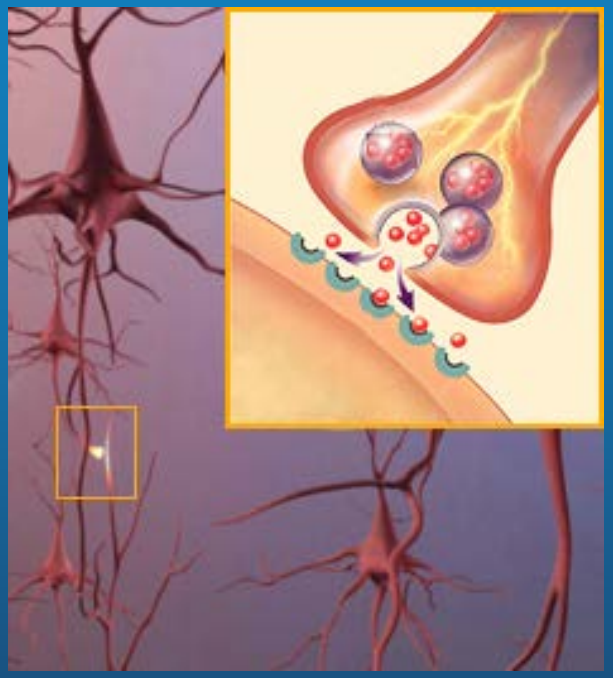
PSYCHOLOGY

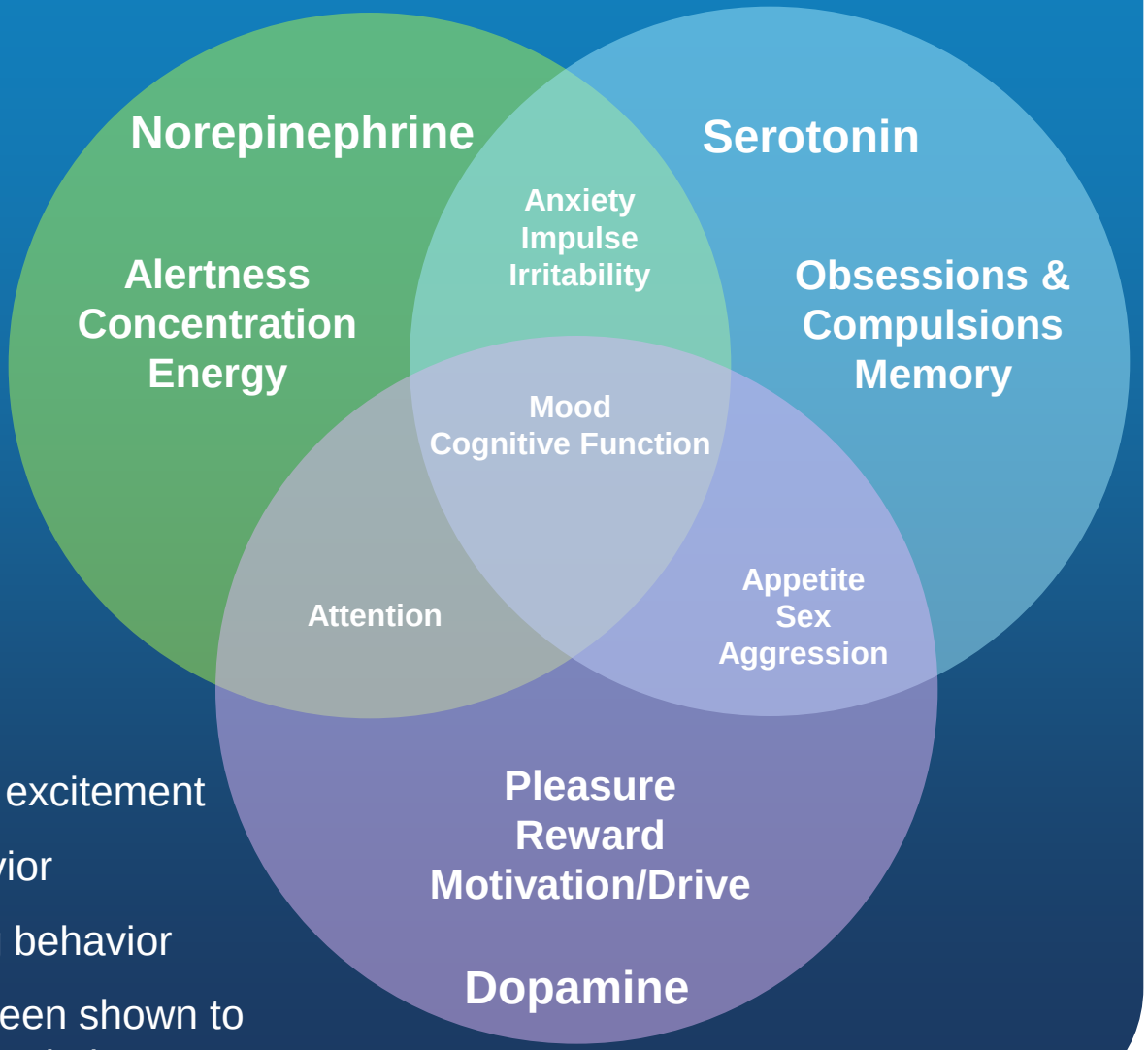
- Learning history
- Cognitions
- Mood / Emotionality
- Coping skills
- Personality traits

SOCIOLOGY

- Cultural norms
- Familial influences
- Peer influences
- Accessibility
- Resources ($)

Biology: Neurotransmitters





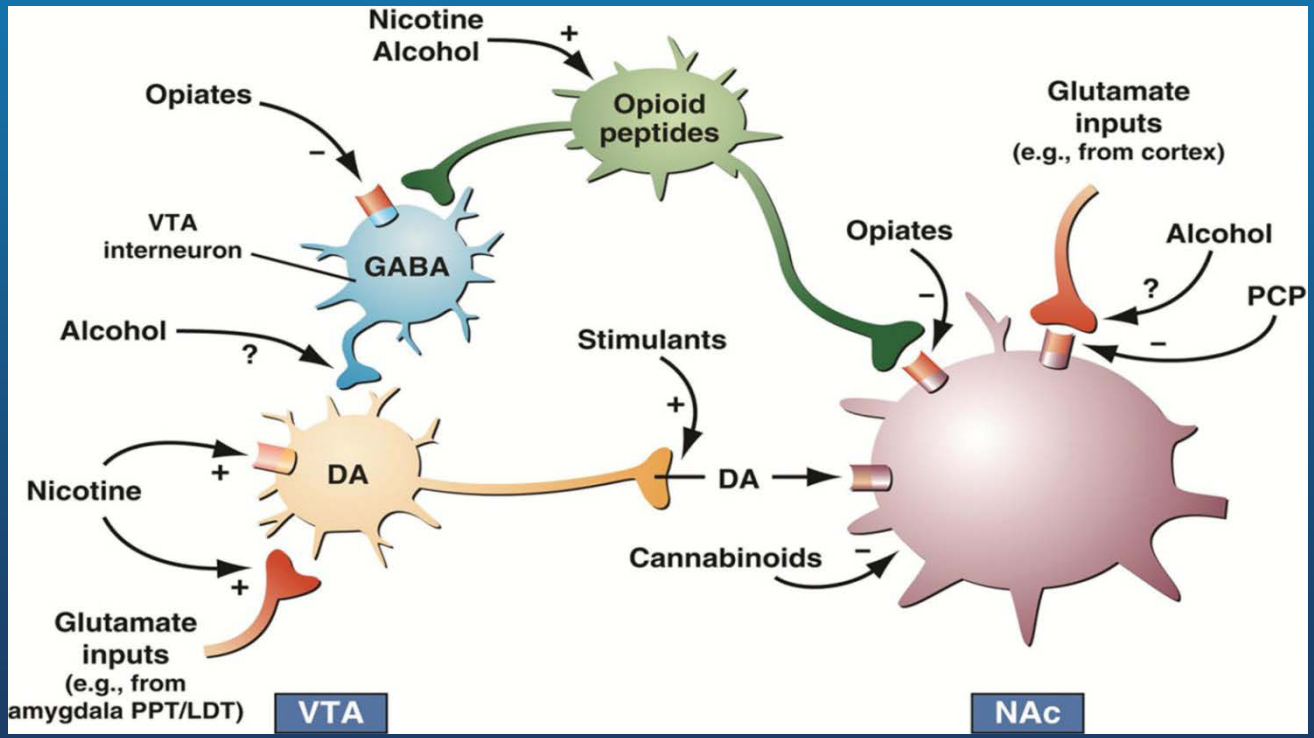
Pathological Gambling:

- ↑ Noradrenaline = ↑ heart rate / excitement
- ↓ Serotonin = ↑ impulsive behavior
- ↑ Dopamine = ↑ reward seeking behavior

(some dopamine agonists have been shown to induce pathological gambling behavior)

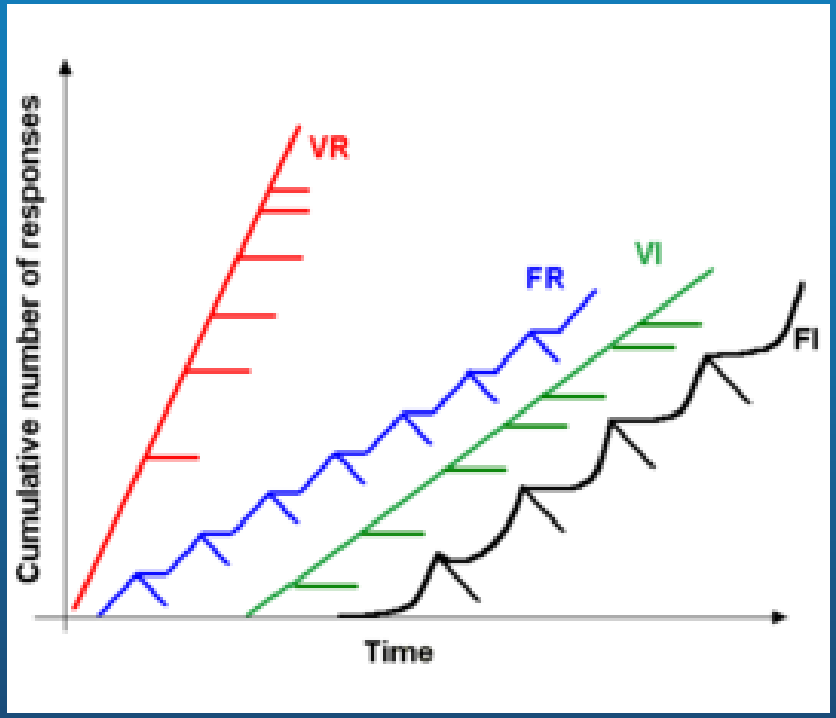
- “Drugs of abuse, despite diverse initial actions, produce some common effects on the ventral tegmental area (VTA) and nucleus accumbens (NAc).” (Koob, 2011, p. 58)

- **Disfunction in the VTA-NAc “reward” pathway (lower dopamine) has also been noted in mood disorders.**



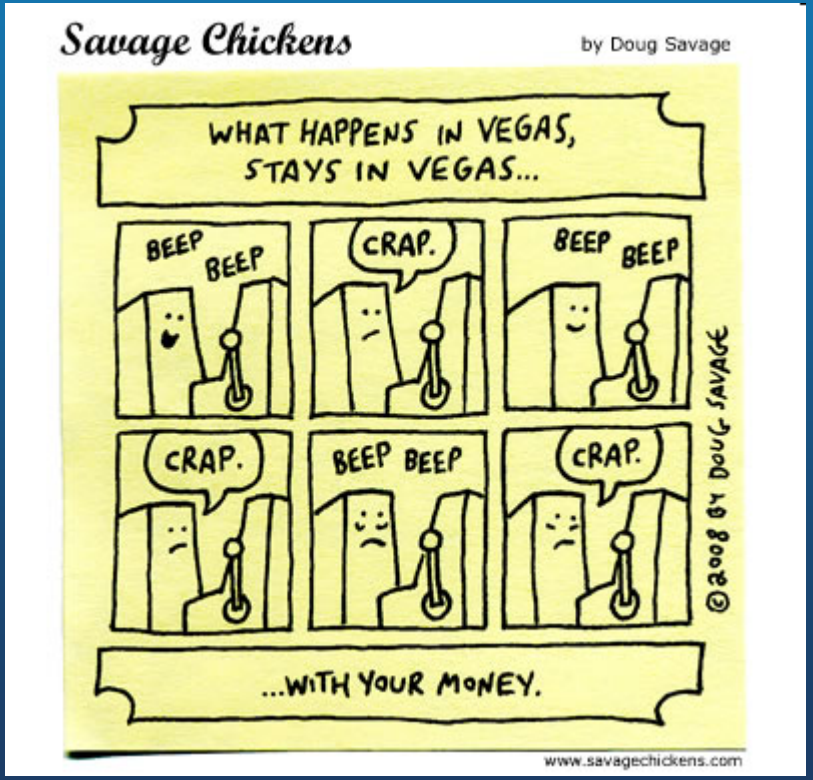
Koob, G.F. (2011). Neurobiology of addiction. *Focus, 9*, 55-65; Nestler et al. (2002)

Psychology: Learning History



Reinforcer = Anything that ↑ behavior

Punisher = Anything that ↓ behavior



FI = Fixed Interval (every 5 minutes)

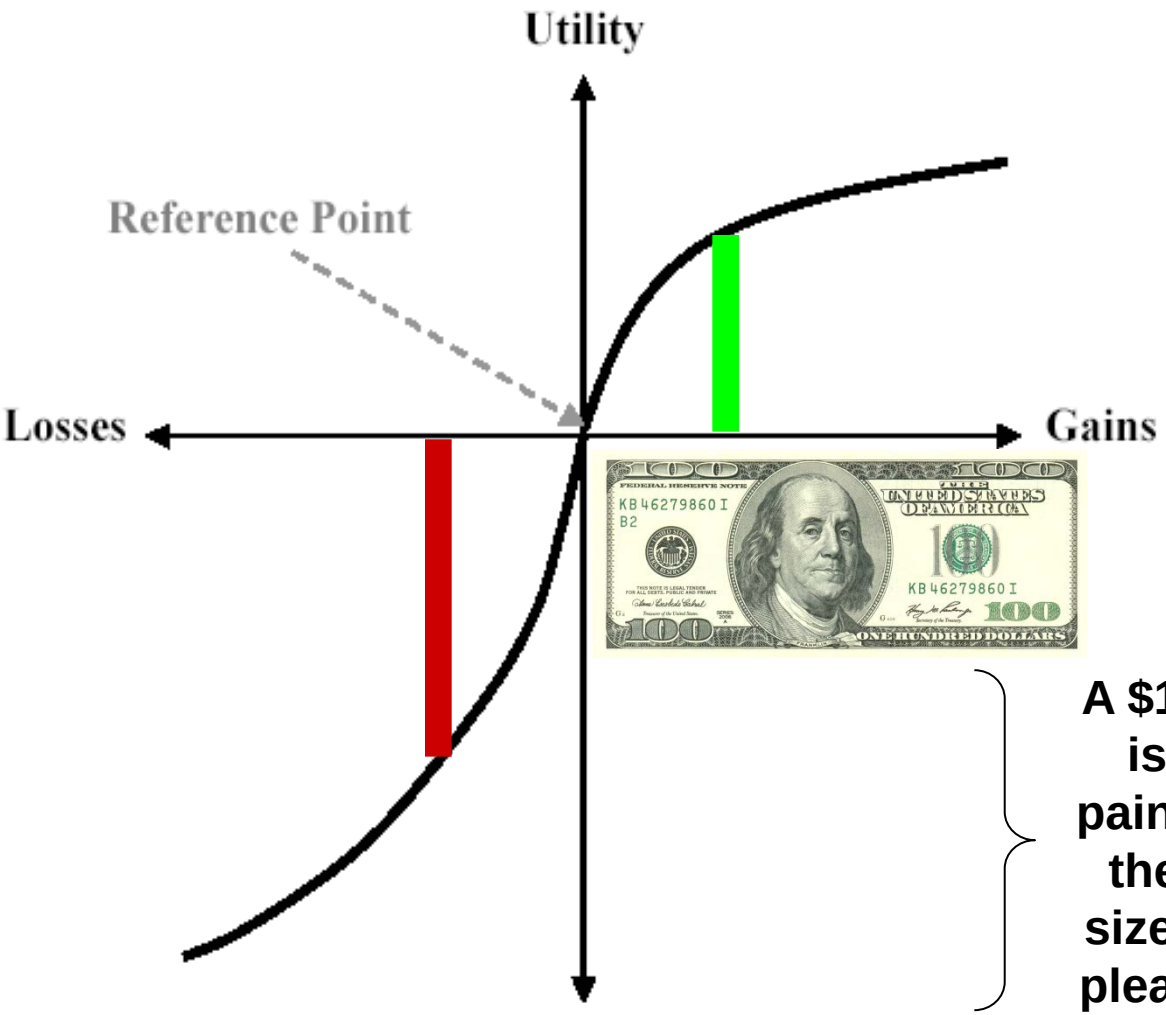
VI = Variable Interval (after X minutes)

FR = Fixed Ratio (every 5 responses)

VR = Variable Ratio (after X responses)

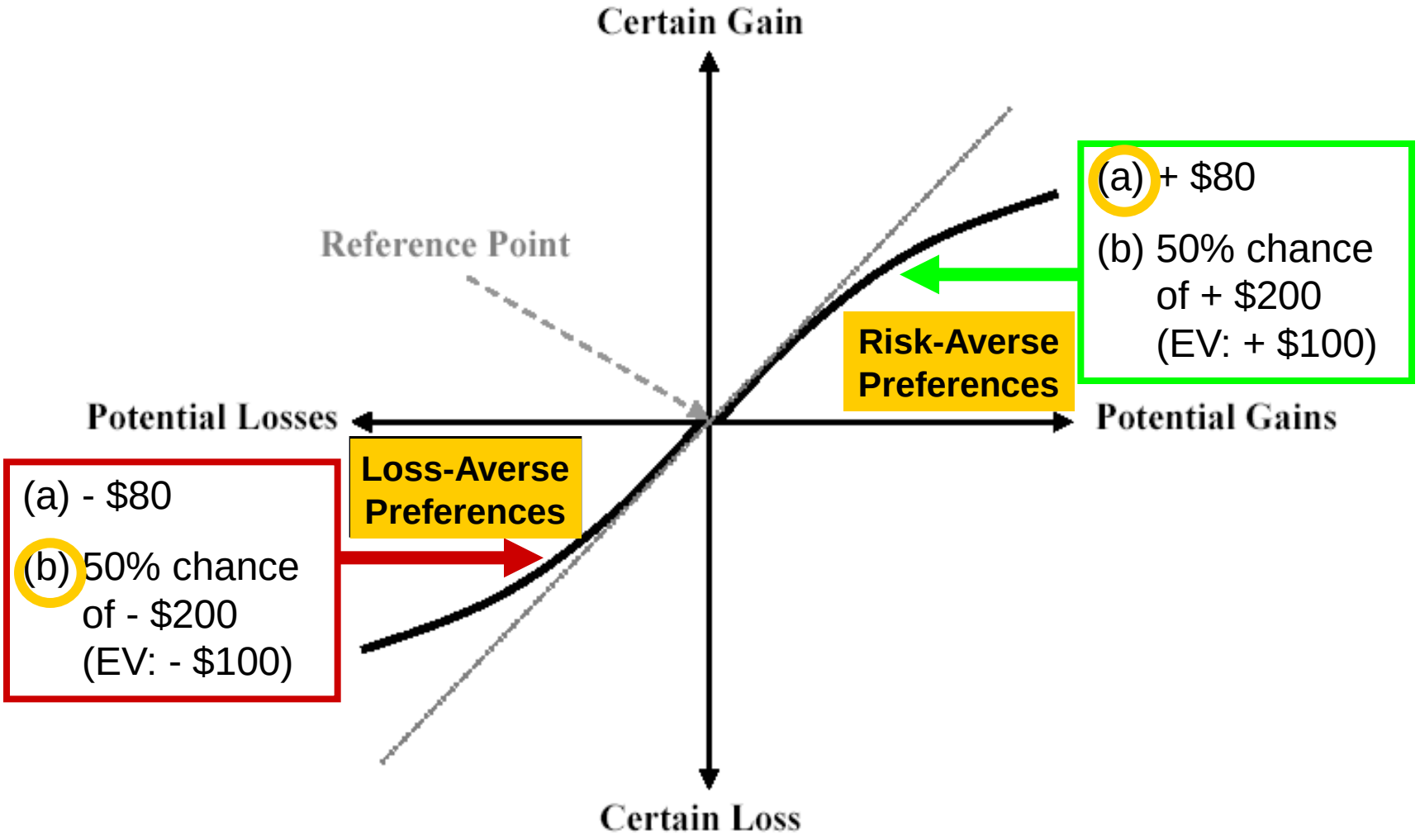
What is the reinforcer?

Prospect Theory: NOT losing (vs. winning)



A $100 loss is more painful than the same size gain is pleasurable

Prospect Theory: Loss Aversion



Withdrawal is a reinforcer

These symptoms include:


Cold shakes.


Chills and sweating.


Fever-like symptoms.


Mood swings.


Anxiety and depression.


Bone pain.


Vomiting.


Insomnia.

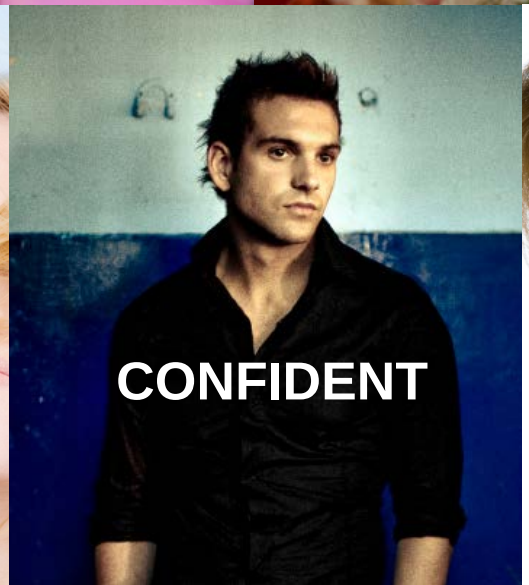

Diarrhea.

Psychology: Cognitions

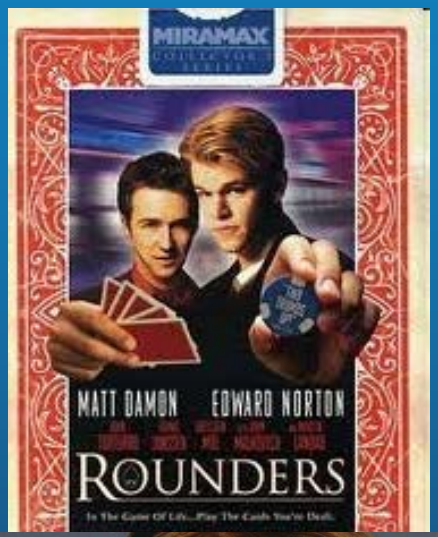
No matter how much we KNOW that each event is independent, we tend to hold a deep belief that chance is self-correcting in the short run (the *Gambler's Fallacy*).

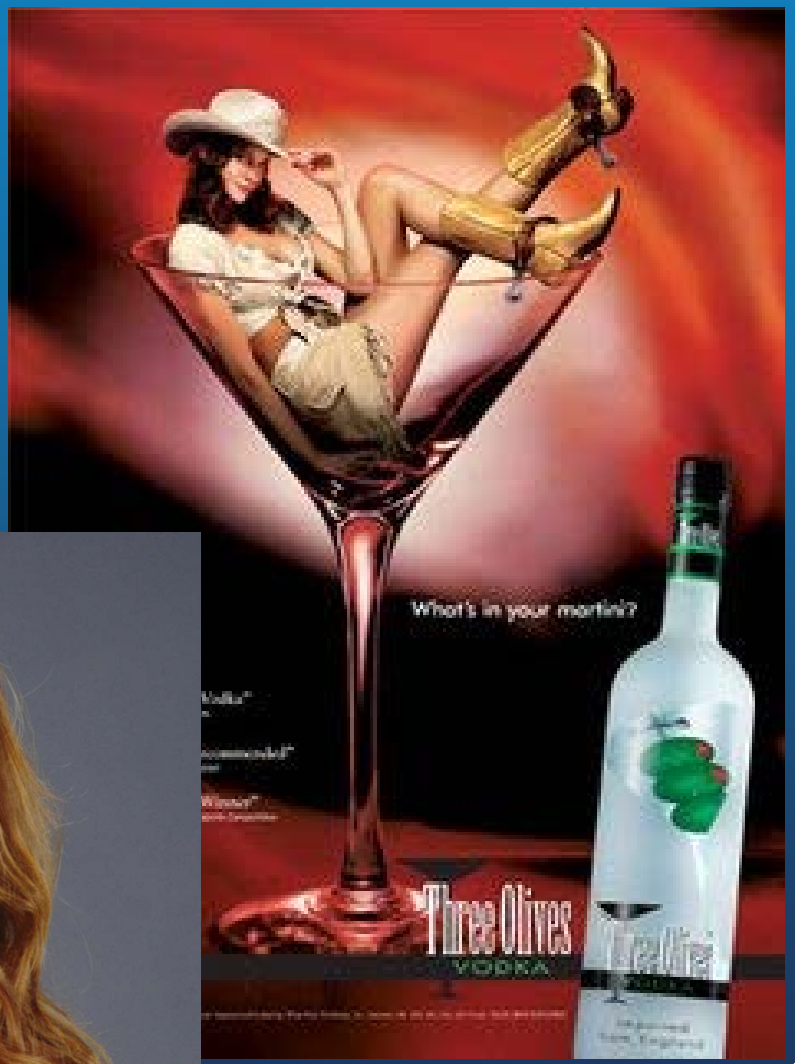
Psychology: Cognitions

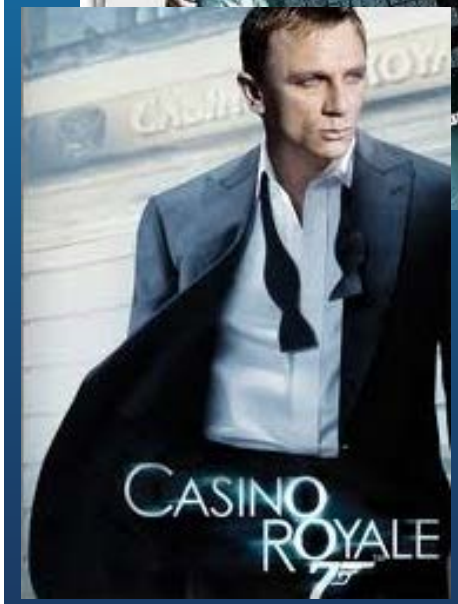
Expectancies = “Alcohol makes me…”



Sociology: Cultural Norms







What is *Functional Analysis*?

- A systematic, iterative approach to understanding and changing behavior by identifying the context in which it occurs (the situations or stimuli that either precede it or follow from it) and manipulating factors believed to elicit/maintain the behavior.

Behavioral Assessment

- Functional analysis begins with the behavioral assessment of:
  - The **context** of behavior (when, what time, where, with whom, how often, thoughts, emotions/feelings)
  - The **function** of behavior (what the behavior does for the individual)

Behavioral Interview

- One way to gather this information is through unstructured behavioral interviews:
  - What is your primary concern?
  - When did the behavior/problem begin?
  - How frequently does it occur?
  - When and in what situations does it occur?
  - Tell me about a typical occasion.
  - Generally, what occurs before and after it?
  - What goes through your mind while it is occurring?
  - What have you done to change things thus far?

Self-Monitoring

- One limitation of behavioral interviews is they require complete reporting (i.e., client awareness of behavior)
- Information on the context and function of behavior can and should also be gathered through self-monitoring
  - Mood / thought records
  - Tracking alcohol / drug use
  - Tracking gambling episodes
- BONUS: Self-monitoring ALONE can cause changes in problem behavior
- Can also collect "collateral" reports to verify

Develop “Model” of Behavior from Assessment

- Antecedents (Predictors)
  - Mood / emotions
  - Thoughts
  - Discrete events / stressors
- Behavior
  - Single behavior vs. co-occurring
- Consequences (Outcomes)
  - Short-term
  - Long-term

Example: Self-Medication

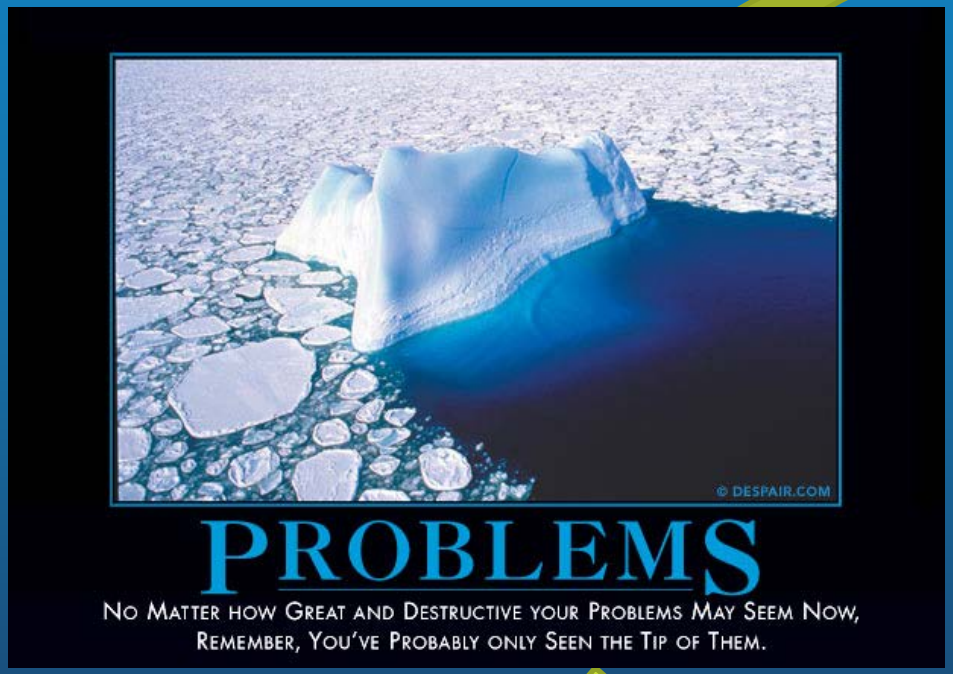
Gambling / substance use:
↑ Dopamine

Mood disorder:
↓ Dopamine

Psychological "after math"

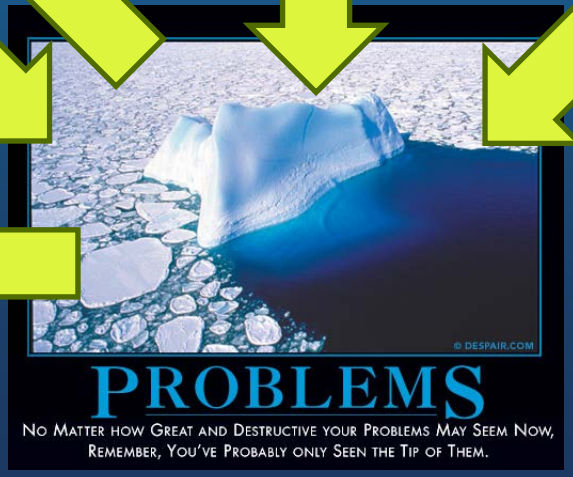
Example: Avoidance

Gambling / substance use: Distraction



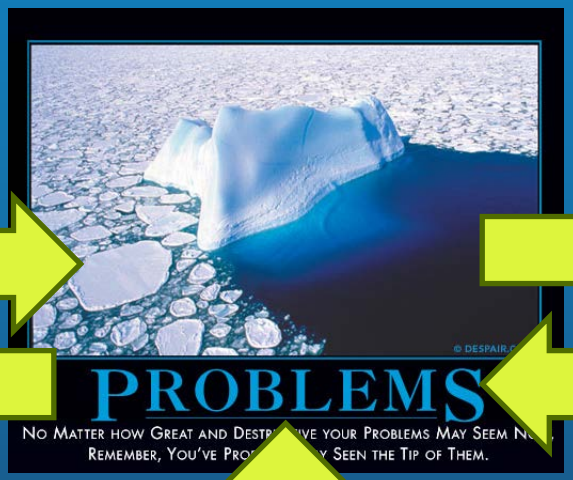
Problems increase (or do not go away)

Often Complex & Bidirectional



Key question: What came FIRST?

More Frequently It's...



Where does **suicidal ideation** fit in this picture?

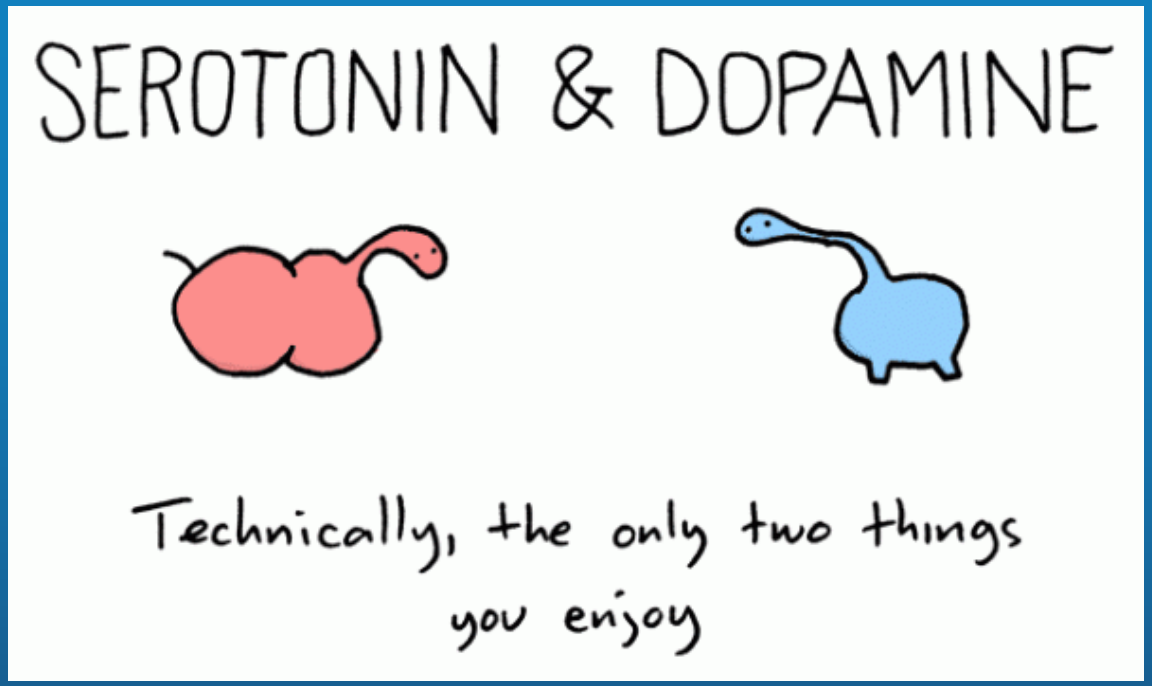
Choosing Treatment Targets

- Always, always, always start by treating suicidal risk! (*some* risk factors listed above)
- Next, target therapy-interfering behaviors (e.g., not showing up, showing up intoxicated, not completing therapy work)
- Then, test your hypothesis of maintaining factors by disrupting one element of the system—choose one as UPSTREAM as possible.
- Be prepared to REFER OUT if main driver of behavior is not within your scope of practice!
  - Clients don't always see their "problems" as problems, and may be seeking treatment for "something else."

Treatment Options

BIOLOGY

Medication



Serotonin:

- SRIs & SSRIs*
- Mood Stablizers* (Lithium carbonate)

(Nicotine patch)

*FDA approved for MDD

Norepinephrine:

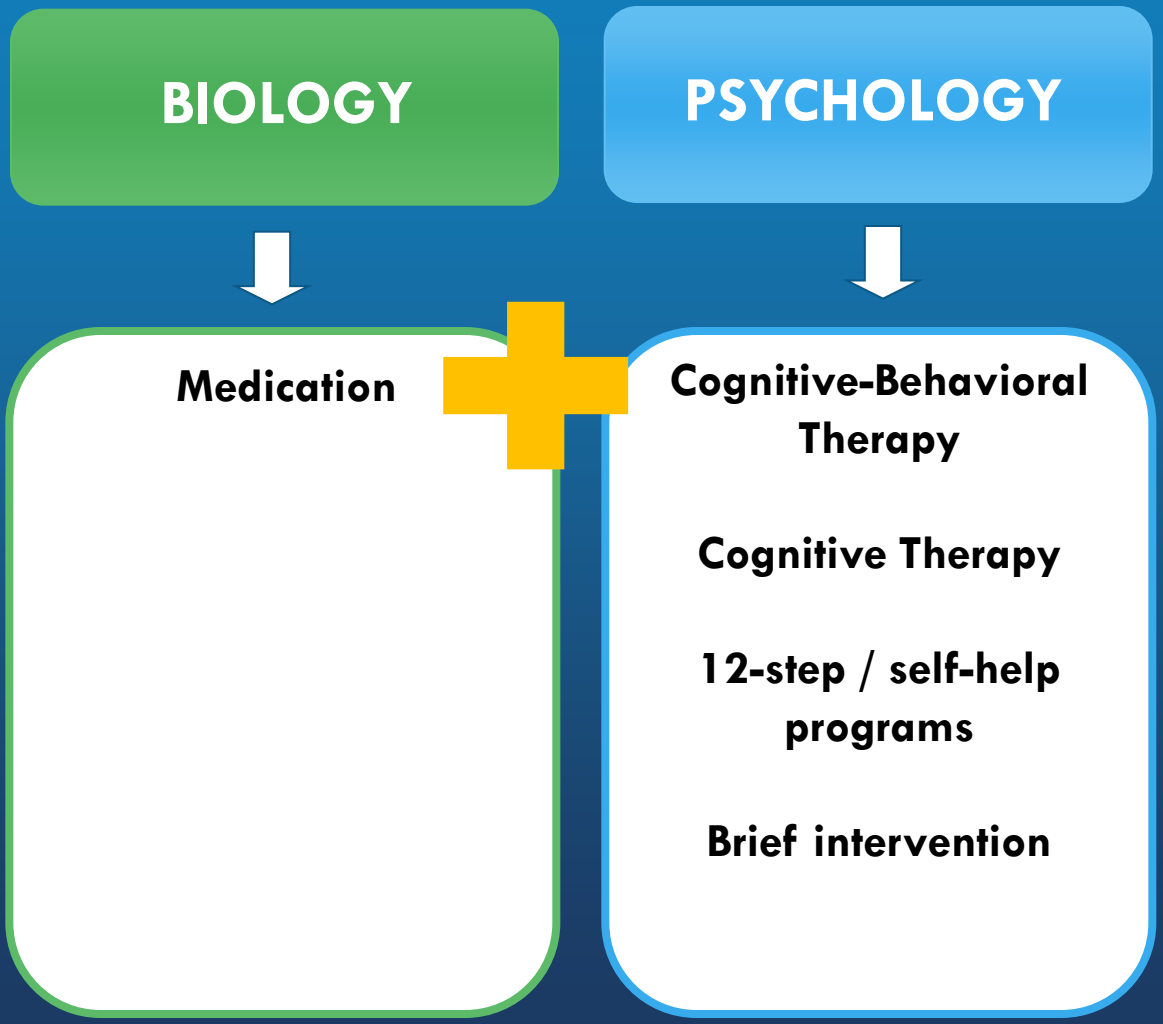
- Bupropion* (Wellbutrin)

Dopamine antagonist:

- **Naltrexone (ReVia)****

****FDA approved for SUDs**

Treatment Options



Cognitive-Behavioral Therapy

Antecedents

Behaviors/beliefs

Consequences

Challenge cognitions

Teach adaptive coping skills

Teach protective behaviors

A: Get back a test with a failing grade.

↓

B: Think: "I can't do anything right!"

↓

B: Feel: Sad, Worthless

↓

B: (Think: "I need to feel like a winner." "I need to do something fun.")

↓

B: Go out to the casino and gamble.

↓

C: Lose my rent money.

Cognitive Therapy: Challenge Thoughts

- Establishing clear understanding of randomness (i.e., the outcomes of gambling events are independent, thus past events do not signal future outcomes)
- Increasing awareness of other erroneous beliefs about gambling (e.g., illusions of control, belief in luck/systems)
- Connecting how erroneous beliefs relate to the individual's gambling behavior
- Correcting/changing erroneous beliefs (e.g., with thought records, behavioral experiments)

Treatment Options

BIOLOGY

Medication

PSYCHOLOGY

Cognitive Therapy

Cognitive-Behavioral Therapy

12-step / self-help programs

Brief intervention

SOCIOLOGY

Change cultural perceptions

Family education/therapy

Limit access to venues where problematic behavior occurs

Sociology: Limit gambling access

- Self-exclusion / mandatory exclusion
- Limit cash access
- Enlist help of family members (couples/family therapy)

STEP (Self-Transaction Exclusion Program)

This device is STeP Self Transaction Exclusion Program enabled.

NOTE: To ensure that the device is STEP enabled look for this sticker.

“Natural recovery” & moderation

- About 33% of individuals with PG quit or reduce gambling on their own without treatment or GA.
- Resolved gamblers most frequently report they stopped gambling via “stimulus control” and “new activities.”
- Maintain changes through “new activities,” “remembering negative consequences,” and “social support.”

Breaking Down Silos

- May need to develop referral network for issues outside of your scope of practice
- Consider if “concurrent” or “serial” treatment is best based on your functional analysis

Thank you!