Disclosure

- There are no conflicts of interest to declare.

Shifting Legal Norms

- 33 States and the District of Columbia have passed laws legalizing marijuana in some form.

- 10 States and the District of Columbia have adopted laws legalizing marijuana for recreational use since 2012. (NCSL, 2018)

State of the Research

- Research evidence is still very limited.
- 2016 National Academies' Report on the health effects of cannabinoids:
  - Evidence: Conclusive, Moderate, Limited
- *Conclusive* evidence for:
  - Treatment of chronic pain in adults.
  - Treatment of chemotherapy-induced nausea.
  - Improving patient-reported multiple sclerosis spasticity symptoms.

Research in its Infancy

- *Limited* evidence that cannabinoids are effective for:

  – Improving anxiety symptoms, as assessed by a public speaking test, in individuals with Social Anxiety Disorder (Bergamaschi et al., 2011).

  - Initial findings, pretreatment CBD dose lowered anxiety during a speech performance.

  - Short-term "effectiveness" in context.
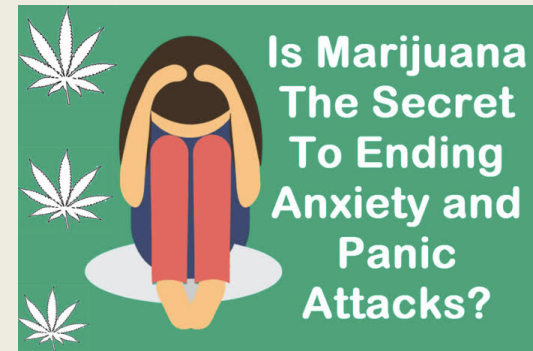
Shifting Socialization / Commercialization Norms

- Growing social acceptance and commercial forces have created a gap between proposed benefits and actual state of the evidence.

- Anecdotal evidence and early studies can lead to idealized claims of cannabis' health benefits.

- New and changing dose levels, strains, and methods of intake further complicate research implications.

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Anxiety Focused Marketing

Growing Challenge with Problem Recognition

- Patients may increasingly view cannabis as an adaptive way to cope.

- Social reinforcement, marketing, "research" references can make cannabis seem like a simple solution.

- A particular challenge for a vulnerable population: individuals with Social Anxiety Disorder (SAD).

Social Anxiety Disorder and Cannabis Use

- *Moderate* evidence of a statistical association between regular cannabis use and increased incidence of SAD.
  - Frequent cannabis use associated with increased incidence of SAD at 3 year follow up (Blanco et al., 2016).
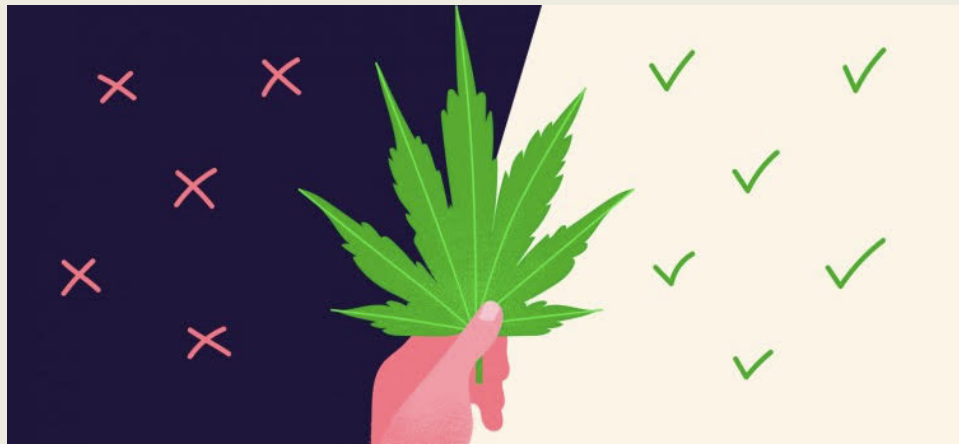
SAD and Cannabis Use
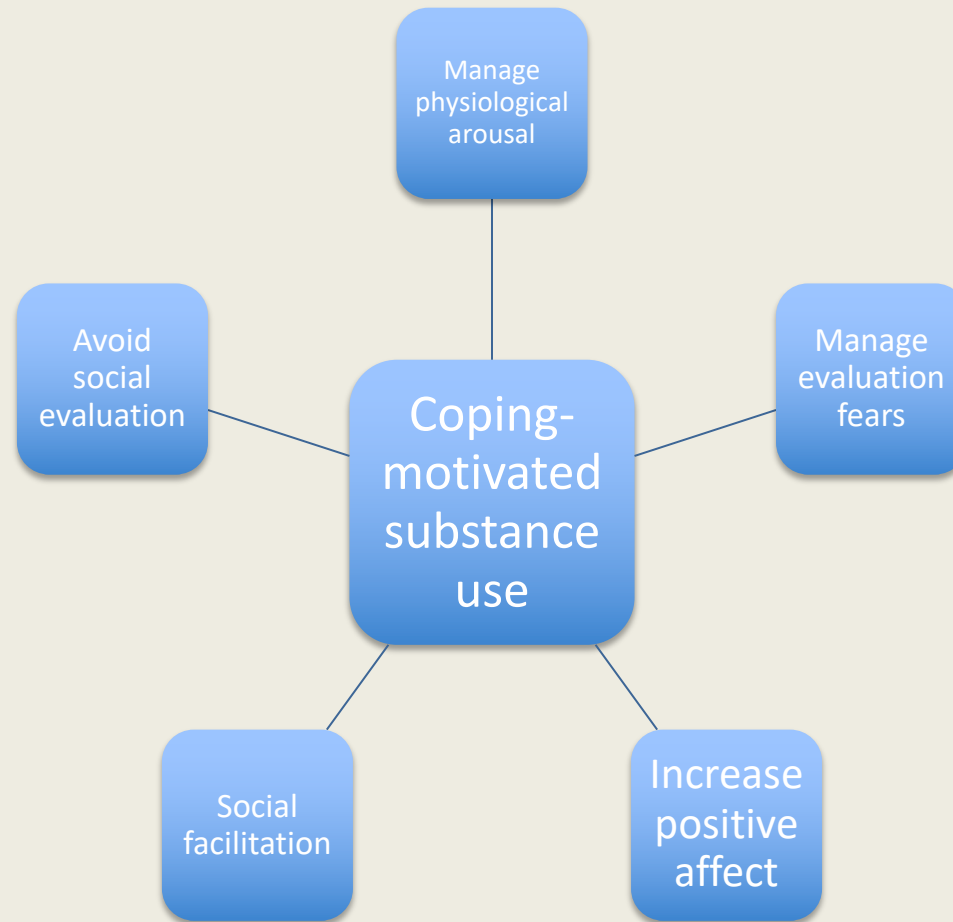
- Socially anxious individuals are especially vulnerable to cannabis-related impairment.

  – SAD in adolescence predicted greater rates of cannabis dependence by age 30 (Buckner, 2008).

  – SAD more strongly related to cannabis dependence vs. abuse.

  – One third to one fourth of people with cannabis dependence have SAD; higher than panic disorder, GAD, and PTSD (Stinson et al., 2006).

A Clinical Challenge

- As cannabis use becomes increasingly normalized / idealized, imperative we assess SAD patient's cannabis use.

- Clinicians must not only assess use, but collaboratively conceptualize patient's function/s of cannabis use.

Buckner (2013) Biopsychosocial model of SAD-SUD

Manage physiological arousal

Avoid social evaluation

Manage evaluation fears

Coping-motivated substance use

Social facilitation

Increase positive affect

A Hidden Treatment Barrier

- Dangers of over-utilization of coping-motivated cannabis use in SAD patient's:
  - Psychological dependence
  - **Learning interference** / symptom maintenance
  - Exacerbation of symptoms over time
  - **Barrier to progress** even if in treatment
  - Can lead to reliance on substance
  - Substance Use Disorder

Case Example: Intro

- 20 year-old male college student:
  - On leave of absence for a semester due to progressing isolation, social anxiety and avoidance, unable to fulfill class requirements. Onset of depressive symptoms.
  - During initial assessment, patient reports cannabis use by vape pen on a daily to every other day basis.
  - Patient self-reports cannabis use increases social enjoyment and helps ease gastrointestinal symptoms in social situations.
  - Patient self-reports structure of cannabis use, utilizing different strains and dose varietals (THC vs. CBD) perceived as helpful for different task demands (attending a party vs. assisting sleep onset afterwards).

Strategies to Alter Maladaptive Cannabis Use

- Collaboratively and non-judgmentally assess patient's cannabis use, likely functions of use, perceived benefits and perceived potential costs.

- Provide psychoeducation regarding maladaptive functions of cannabis use for long-term treatment progress.

- Establish goal consensus of altering identified maladaptive use, develop alternate coping responses to allow new learning to occur.

Strategies to Alter Maladaptive Cannabis Use

- Collaboratively develop behavioral experiment hierarchy to alter maladaptive cannabis use.
  - Delay onset of use
  - Reduce frequency and quantity of use
  - Alter dosage, CBD vs. THC
  - Alternate coping behavior
  - Experiment beginning situations without use
- Identify behavioral goal of experiment.
- Identify automatic thoughts, predictions, perceived outcomes and ability to cope.
- Reinforce new learning, grow distress tolerance, ability to cope without short-term benefits of use.

Case Example: Continued

- Conceptualized cannabis use functions of:
  - Managing physiological arousal in social situations.
  - Avoiding feared outcome of becoming sick, or needing to urgently use restroom in social situation.
  - Managing evaluation fears.
- Established behavioral experiment hierarchy to alter use function, test and alter beliefs:
  - Delay increments of 15 minutes after onset of anxiety sxs before use.
  - Alter dosage use: only CBD vs. typical THC use.
  - Begin exposing to situations with shorter time length with no use, utilize external attentional focus when notice physiological sensation.
- Overall cannabis use decreased, though continued.
- Cannabis use functions altered along with other treatment targets, symptoms stabilize to pre significant academic and social impairment levels.

Summary

- Growing normalization of cannabis use can lead to patient's increasingly viewing it as a positive coping behavior.

- Need to assess cannabis use in all SAD patients, including an understanding of its specific functions with the patient.

- Target maladaptive functions of use that interfere with needed exposure and learning for treatment to progress.

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