Prevention of Marijuana Misuse: In the Legal Zeitgeist

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What Could Influence a Change in Prevention Programming?

- Recreational Use of Marijuana Can Change The Large Social Context
  - Increase in prevalence among teens?
    • Colorado-no; Washington-yes
      • Maybe due to liberality of pre-existing medical marijuana laws and operations
      • But: Colorado retailers study (n=20 shops): all have age signs, all ask to see IDs, 19 in full compliance
    • Youth using before law change increase use after change
  - Decrease in perceived risk among teens?
    • Colorado-yes (though 40% perceive moderate/high risk from weekly consumption in focus groups)
    • Washington-yes
  - Increase in ED visits among teens?
    • Colorado-yes
    • Washington-? (probably…)
  - College Youth?
    • In legal states, college youth more likely to use marijuana, with academic and health consequences
    • Big decrease in use disapproval by 18-25 year olds from 2002 to 2013, but not younger ages
  - Focus groups suggested more use of edibles (can be hidden better, don’t have to smoke)

References: Blavos, 2018; Brooks-Russell, 2018; Bull, 2017; Buller, 2016; Cerda, 2017; Friese, 2016; Ghosh, 2017; Hall, 2017; Rusby, 2017; Salas-Wright, 2015
What Could Influence a Change in Prevention Programming? (cont.)

- **Social Media Depiction of Marijuana is “Evolving”**
  - YouTube - modeling use of blunts (Montgomery, 2018)
  - Twitter Chatter - Positive tweets including health benefits, fun, social activity, romance (Cavazos-Rehg, 2015; Krauss, 2017)
  - Instagram
    - Of all marijuana-related posts: ads (9%)
    - Of images: buds/leaves most commonly depicted (63%), concentrates (20%)
    - Of ingestion posts: dabbing concentrates (20%) (Cavazos-Rehg, 2016)
    - 70% of participants in these websites are 20-29 years old
    - 38% of these websites no security measures;
    - 52% claim benefits (e.g., anxiety, insomnia, pain). (Bierut, 2017)
      - Greater exposure to medical marijuana ads higher likelihood of use one year later, and the converse (D’Amico, 2015)
One sees the same sorts of etiologic variables that fed into drug abuse prevention programming for the last 40+ years. As examples:

- Lack of coping skills as risk factors (Lee-Winn, 2017)
- Cognitive misperceptions, perceived safety, availability, acceptability (Guttmanova, 2018)
- R-rated movie media influences (if parent supervision, protective; Cox, 2018)
- Refusal skills and decision making skills as protective (Stephens, 2009)
Summary: Implications for Prevention?

- Need to address perceptions of acceptability, safety
- Need to combat informational social influences (e.g., electronic media influences)
- Need to include edibles and concentrates in coverage of marijuana products
- Need to differentiate medical use versus misuse
- Need to mention newer routes of administration (e.g., vaping, dabbing)
What is the State of Marijuana Use Prevention?
12 mediating change agents in substance use prevention programs (Hansen, 1992)

- Normative beliefs: perceptions about prevalence or acceptability of peer drug use
- Social, psychological, and health consequences beliefs (e.g., being in a group, have fun, health risk)
- Lifestyle incongruence: drug use viewed incongruent with lifestyle and future aspirations
- Self-esteem: feeling personal worth, and characteristics for a positive self-evaluation
- Commitment: regarding substance use behavior in future, such as public statements of intentionality

- Resistance skills: perceived ability to identify and resist pressure to use drugs
- Goal-setting skills: degree to which one is able to engage in goal-setting behaviors
- Decision skills: understand and apply a rational strategy for making decisions
- Stress management skills: skills for coping with stress, for relaxing, for confronting challenges
- Social skills: ability to establish friendships, be assertive with friends, and get along with others
- Assistance skills: ability to give assistance to others with problems

- Prosocial alternatives: participation in enjoyable activities that do not involve substance use

REMEMBER: These still operate….BELIEFS, SELF-PERCEPTION, SKILLS, ALTERNATIVES
Summary of Marijuana Prevention-Related Reviews, Meta-analyses, New Pilot Work and RCTs
What policies work for youth in legal states?

- Prevalence higher (Grades 7 and 9) if out of school suspension used, and if students reported low policy enforcement (punishment scenario)
  - Roadside drug testing shows promise (Stockings, 2016)

- Prevalence lower if receiving abstinence messages and violators counseled about dangers of use (Evans-Whipp, 2014)(prevention and treatment scenario)

- Focus group suggestion: restricted access to marijuana social media pages may help (Moreno, 2018)

- Impact of price not clear (distribution variation; Quinlan, 2015)
School-based prevention impact on marijuana

- THERE HAVE BEEN VARIOUS REVIEWS OVER THE YEARS. AS EXAMPLES:
  - Sussman & Skara (2003)-6 of 9 studies that measured marijuana use changes found 6% average relative reductions in 30-day marijuana use (an average of 5 years post-program). Promising but Tentative.
  - Flynn (2015)... 5071 publications led to including only 6 RCTs with 3 showing program effects. Tentative.
  - Mixed results globally in RCTs (Agabio, 2015)
  - Effect for marijuana significant but often small (d= -.07, p<.01, k=21; Lize, 2017)

- GIVEN WHAT WE KNOW, WHAT WORKS FOR 14-18 YEAR OLDS? EMERGING ADULTS?
  - Interactive, comprehensive life skills (self-management, social competencies, refusal skills, decision making) for 14-18 year olds works best (Botvin, 1984; Lemstra, 2010; Lize, 2017; Marsiglia, 2018; Sanchez, 2016; Stockings, 2016; Tobler, 1999)
  - Motivation enhancement appears important for older teens and emerging adults
    - Using MI, counselor reflections to older teen participant change talk marijuana use prevention and reduction (Barnett, 2014)
    - A motivation enhancement-skills-decision making program shows promise for older teens (Sussman et al., 2012)
    - Most programs don’t work with college youth (White, 2015). However, Brief MI + a behavioral economics manipulation shows promise (n=97; Yurasek, 2015), as does use of personalized feedback (n=212; Lee, 2013).
Family-based Prevention

- Youth focused components designed to encourage more positive family relationships and a positive orientation toward the future-key factors that may work (Van Ryzin, 2016, EF=.31). Relatively small ns. Tentative but promising.
- Development of positive social relationships important (Spoth, 2018)
- Structured time may be important (Skinner, 2017).
- Parental monitoring and child management generally important (Van Ryzin, 2016), particularly in mid-adolescence (Epstein, 2017).
- Accurate information about consequences in family context might be good (Skinner, 2017).
  - Washington parents know little about the marijuana laws, occasionally talk with children (mostly about household rules pertaining to use) (Mason, 2015)
Technology-based Prevention

- Computer-based prevention works at mid-term follow-up (6 months), maybe not longer-term, if includes skills training, education, therapy type features. Tentative. (Schwinn, 2019; Wood, 2014).
  - Videogame format weak impact in small pilot study (Duncan 2018)
    - Interactive? (learning and belief change)
    - Personalized? (tailored)
    - Monitored? (not “toking” while engaged in sessions)

- Media-based if well-targeted, and bolstered by community-level support (Evans, 2017; Quinlan, 2015)
  - In-person programming appears to be needed still.
What To Do for Older Teens and Emerging Adults?
The Highest Risk Group
Motivation-Skills-Decision Making
Model of Problem Behavior

Motivation/
Cognitive Misperceptions

Social and
Self-control Skills

Decision Making

Marijuana Misuse
Motivation-Skills-Decision Making Model

Motivation:

- People like to live in harmony between their beliefs and behaviors.

- Awareness of discrepancies in one’s beliefs and behavior leads to a desire to reduce the discrepancies (motivation).
More on manipulation of motivation

- Examine one’s beliefs and perspectives
- Examine one’s ambivalence about marijuana use
- Clarify what kind of person one is and what one values
- What are most people one’s age like?
- Resolve self-arguments
Motivational Interviewing - Motivational Enhancement

- Rebelling against negative stereotyping (high school youth are all dopers, rebel by not being a doper)
- Making use of perspective-taking through psychodrama (family may complain because they care; more energy without use)
- Health as a value (one needs good health to get through school well)
- Attitudinal perspectives (most people are “moderates”)

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Ex marijuana user/abuser - (DANNY / DANIELLE)

- I used to smoke weed everyday. It became a problem.
- I felt like I couldn’t make it through the day without at least one joint.
- I depended on marijuana to make me feel better. All I wanted to do was to be high and not think about anything. I told myself, and everyone else, that I did it because I was stressed.
- A lot of the jobs are asking for drug tests. I don’t want to miss out on a job that I really want because of using weed. It’s not worth it.
- Since I quit, I feel better. I have more energy and I’m finally taking care of the things in my life.
Material that Emphasize Skills

- **Social skills**
  - Listening, speaking, asking open-ended questions

- **Coping**
  - Healthy alternatives for coping with stress

- **Self-control**
  - Matching behavior to different social situations
  - Assertiveness
Material the Emphasizes Decision Making

- Brainstorm choices
- Consider benefits of each choice
- Consider risks of each choice
- Make a choice with most benefits and least risks
- Re-evaluate
Consider Prevention Across the Lifespan
Drug abuse prevention programming as a function of developmental stage

- **Young children (0–5 years old)**
  - **Attachment** enhancement, parenting skills, social and self-control skills, **emotional learning**, decision making, academic preparation, resource acquisition, maybe simple drug consequences facts
    - Use of toys, nonverbal demonstration, recognition cards, extensive adult involvement, use of timeout (ICPS, NFP, Fast Track, PATHS, HALO)

- **Older children (6–11 years old)**
  - Social and **self-control skills**, decision making, **emotional learning**, academic skills and **commitment to school**, behavioral management, parenting skills, media awareness, **drug consequences**
    - More verbal instruction, attribute-based similarity, rule posters and stickers, involvement with more adults outside the home (BrainTrain4Kids, PY/PM, Good Behavior Game, Caring School Community Program, KYB, KACM, CC/FSP, GGC, SSDP, LIFT, BBBSA, Smoke-free Kids)
Drug abuse prevention programming as a function of developmental stage (cont.)

- **Young teens (12–15 years old)**
  - Drug prevalence overestimates reduction, normative restructuring, media literacy, refusal assertion, decision making, academic remediation, peer and family communication skills, public commitment, drug consequences
    - Classroom discussion, classroom peer group interaction, class polls, behavioral rehearsal, role play, homework, games, letter writing (LST, All Stars, Project ALERT, Lions Quest, Project TNT, SFP, 10–14, Family Matters, CLFC)

- **Older teens (16–17 years old)**
  - Motivation enhancement, stress-coping skills, self-control and communication skills, decision making and goal monitoring, vocational skills, resource acquisition, drug consequences, tobacco cessation
    - Talk shows, classroom discussion, peer group interaction, class polls, behavioral rehearsal, games, personal journaling, counseling (Project TND, RY, Project SUCCESS, ASPIRE)
Drug abuse prevention programming as a function of developmental stage (cont.)

- **Adults: emerging adults (18–25 years old)**
  - Motivational interviewing/enhancement, coping strategies, problem solving, communication skills, drug consequences, “settling-down” material
    - More personalized and private, assessment, personalized feedback, counseling (BASICS, MyStudentBody)

- **Adults: young-to middle age adults (26–50 years old)**
  - Coping skills, decision making, resource acquisition, grief work, motivational interviewing/enhancement, worksite-related issues
    - Personalized and private assessment and feedback, material covering more health domains (e.g., diet) (Healthy Workplace, Coping Matters)

- **Adults: older adults (51 years old and older)**
  - Life perspectives, motivation enhancement, resource acquisition, coping skills, problem solving, social usefulness pursuits, medical supervision, multiple health domains, safe limits
    - Personalized feedback, presentations, group discussion, practice in functional capacity maintenance, use of larger fonts (Aging to Perfection)
Should marijuana be illegal debate?

- **Illegal:**
  - Health risks-addiction, dependence, lung damage, compromised immune system, passive smoking, drug synergic effects, anxiety attacks
  - Stepping-stone drug; why add another toxic substance on the market
  - Social risks-family, isolation, social decay
  - Memory effects, concentration effects
  - Accidents and other monetary costs (e.g., in blood of 30% of fatally injured drivers, 50% of those stopped for reckless driving)
  - Productivity may or may not decrease
  - Health care costs could rise
  - May lead to unhealthy rise in use (and smuggling to illegal states)

- **Legal:**
  - Demand for marijuana is inelastic as a function of law
  - Can be regulated and harm reduced
  - No longer a “forbidden fruit”
  - Government revenue source
  - Decrease enforcement costs
  - Alcohol is legal
  - Free will
  - Encourage research
Underlying Constituents of Addiction

- **1. Appetitive need**
  - For pain reduction, affect enhancement, arousal increase or sedation, cognition expansion or contraction (fantasy, “oblivion”)

- **2. Temporary satiation**
  - Period of subjectively sensing oneself as self-sufficient, okay, incentivized, neurobiologically fit

- **3. Preoccupation**
  - Re: addictive object/behavior, with desire, withdrawal, time

- **4. Loss of control**
  - Difficulty stopping when one wants to, implicit cognition, impulsiveness

- **5. Undesired, negative consequences**
  - Social, role, physical, emotional
    - Sussman & Sussman, 2011; Sussman, 2017; Sussman & Pakdaman, in press

THE JOB IS NOT DONE WHEN WE CONSIDER ANY ONE BEHAVIOR—ADDICTION IS DYSREGULATION OF APPETITIVE MOTIVATION AND CAN OCCUR FOR MANY TYPES OF BEHAVIORS—PREVENTION MUST GRAPPLE WITH THIS KNOWLEDGE (Sussman, 2017)
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