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An Educational Module for Adolescents on Cannabis Following its Legalization

Plainfield, VT

Anna Lidofsky, MS-III

Mentors: Melissa Houser, MD and Deb Gonyaw

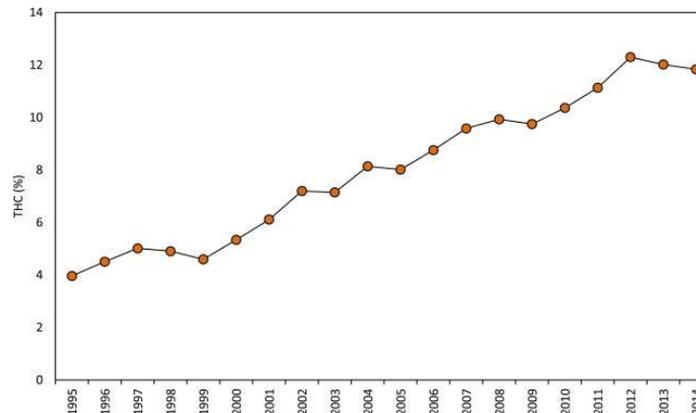
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The University of Vermont
LARNER COLLEGE OF MEDICINE

Health risks associated with cannabis use in adolescents

- 1 in 6 who use cannabis as adolescents are at risk of addiction, compared to 1 in 10 in the adult population¹
- THC is the psychoactive component of cannabis. The amount of THC increases risk of addiction¹ and development of schizophrenia in patients with underlying risk factors²
- Other adverse health effects of chronic cannabis use include associated tobacco use and consequent risk of heart and lung disease^{3, 4} as well as cyclic vomiting syndrome⁵
- Cannabis is more potent than it used to be. The average percent of THC has been trending upward in recent years⁶



The Cost

From the 2017 Vermont Youth Risk Behavior Survey in Washington County, Vermont:

- 43% of high school students reported at least one-time use of marijuana
- 51% of high school students perceive there is slight risk or no risk from using marijuana
- 64% believe if they wanted marijuana it would sort of or very easy to access⁷

This data was collected prior to July 2018, when Act 86 legalized cannabis in the state of Vermont for use by those over age 21

Expected public health consequences associated with legalization include:

- Increased car crash fatalities and injuries
- More emergency department presentations
- More presentations to addiction treatment services
- Increased incidence of regular cannabis use among young people in mental health services and the criminal justice system⁸

Community Perspective

Anna Huffman, RD

- Is a parent of a teenager herself
- Aware of other parents in this community who allow their children to use cannabis
- These parents believe cannabis is just a plant and not harmful
- Parents aren't aware of the age limits with the law
- Also aware of parents who do NOT allow children to use cannabis, but justifying this has become confusing. It's hard for kids to appreciate- "Do what I say, not what I do"

Ginger Cloud, LCMHC, LADC

- The potency of marijuana has increased in recent years, especially when teens are dabbing
- Police have been noticing laced strains of cannabis with fentanyl, cocaine
- Handful of her teenage patients who use cannabis in reaction to "rage" against parents and family
- Ultimately, are patients using cannabis as a way to numb?

Intervention and Methodology, part A

Developed and presented an interactive educational module for adolescents on cannabis use

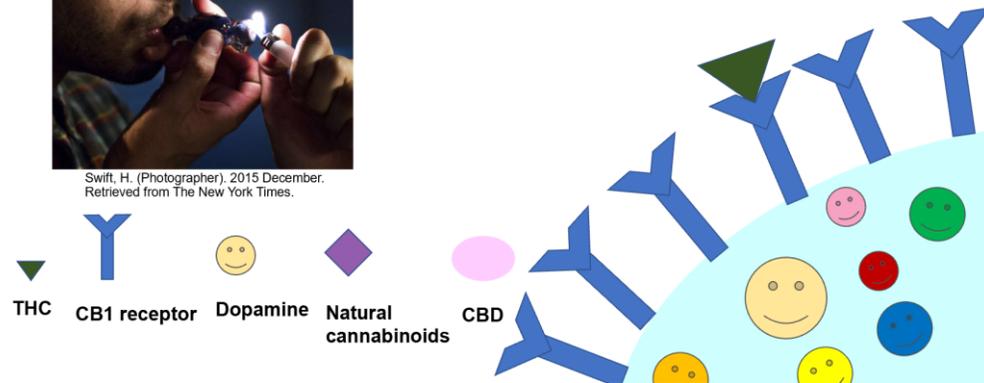
Used simple diagrams with shapes and animations

Topics addressed

Dopamine activates a reward system in the brain



Swift, H. (Photographer). 2015 December. Retrieved from The New York Times.



- Act 86
- How cannabis affects the brain
- Short-term health risks associated with cannabis use
- Long-term health risks such as addiction

Sessions run at the Twinfield Union School: one for sophomores and another for 7th graders

- Before and after the presentation, students were asked to comment on perceptions of cannabis use
- Anecdotally, many students have family members that use cannabis, so neutral language was used in the module to prevent perceived judgement

Intervention and Methodology, part B

- Negative consequences associated with self-concept and interpersonal relations are demonstrated to be stronger motivating factors to quit cannabis than concerns about legality and health⁹
- With this in mind, group discussions were organized to address these consequences by asking students:
 - Who is allowed to use cannabis? In what setting is its use justified?
 - What motivates teens to use cannabis? Are there alternative activities students can engage in instead of using?
- Questions were gathered at the end
- Local resources for managing cannabis use disorder were handed out

Results

Perceptions Before Presentation

“It’s your choice to use- you can choose different strains”

“I know people who smoke it”

“Marijuana is good in moderation for pain and anxiety”

“It’s better for you than alcohol”

“Weed can damage your frontal lobe”

Perceptions After Presentation

“I didn’t know that anxiety was a symptom of withdrawal and addiction”

“You should look into your medical history before experimenting with marijuana”

“I still don’t think it’s as bad as alcohol- an overdose or withdrawal from marijuana can’t kill you but alcohol can”

Evaluating effectiveness and limitations

Effectiveness

- The sophomores were particularly curious about cannabis and schizophrenia, prompting a long discussion, and indicating student engagement
- Students were assigned to write a reflection following the presentation
- Can compare 2017 data to 2019 data from Youth Risk Behavior Survey to see if there are changes in perception of risk of cannabis use

Limitations

- The same module was used for 7th graders and sophomores, despite the difference in educational backgrounds between those two groups of students
- Perceptions were gathered from students in a public forum, which increases potential bias and could have influenced the responses from the students

Future Directions

- Deb Gonyaw, the health educator at Twinfield Union School, is including updates on cannabis use in the next school newsletter.
- The Health Center in Plainfield was recently awarded a grant to collaborate with Twinfield Union School. This intervention has catalyzed that partnership.

Recommendations for future interventions/projects

- Cannabis is an important topic to address in middle and high school health education curricula, especially as its legal status has changed.
- Parents in the community should also be aware of risks posed by cannabis use and work can be done to improve adult community education.
- Other interactive educational modules based on this method can be used to address other pertinent topics in adolescent health care (such as safe sex and contraception or coping mechanisms to combat mental illness).

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Yes No

Interviewee: Ginger Cloud, LCMHC, LADC

Interviewee: Anna Huffman, RD