

5-2023

Better Budtender Training

Vincent McDonald Castillo

Follow this and additional works at: https://digitalcommons.csumb.edu/caps_thes_all



Part of the [Curriculum and Instruction Commons](#), and the [Educational Assessment, Evaluation, and Research Commons](#)

This Capstone Project (Open Access) is brought to you for free and open access by Digital Commons @ CSUMB. It has been accepted for inclusion in Capstone Projects and Master's Theses by an authorized administrator of Digital Commons @ CSUMB. For more information, please contact digitalcommons@csumb.edu.

Better Budtender Training

Vincent McDonald Castillo

Department of Health, Human Services, and Public Policy

CHHS 496A: Senior Field Seminar

Stephanie McMurtrie

3/30/23

Author Note

Vincent McDonald Castillo, Department of Health Human Services and Public Policy, California State University Monterey Bay. This research was supported by the Monterey County Health Department. Correspondence concerning this article should be addressed to Vincent McDonald Castillo, California State University Monterey Bay, 100 Campus Center, Seaside, CA, 93955.

Contact: vmcdonaldcastillo@csumb.edu.

Abstract

A survey conducted by the cannabis education program in the Monterey County Health Department (MCHD) concluded that around 57% of users in the county do not feel educated enough in the subject to form their own educated opinions about cannabis use (Cannabis Education Survey 2022). The MCHD decided to address this concern by collaborating with local dispensaries to provide an educational course in video form for budtenders. This video provides factual information on consumption methods, how differently they may affect people and the recommended time to wait before operating a vehicle. Following this education, consumers of cannabis will have reliable sources to ask questions to as well as become educated on safe practice, safe storage and the legal do's and don'ts of recreational cannabis. The presentation was distributed to one dispensary with a total of 20 views. Only 5% of participants filled out the evaluation, and they felt more educated on cannabis use.

Keywords: Cannabis, Education, Marijuana, Dispensary, Affects

Agency and Communities Served

The Monterey County Health Department is an organization that aims to protect, advance and sustain the health of the people in Monterey County. To achieve this goal, the Health Department offers a wide variety of health-related services in the areas of environmental health, behavioral health, public health and clinical services (*Health Department, 2015*). The Cannabis Education Program, is located in Salinas California and aims to attend 5 community events, 15 schools (both middle and high school) each year as well as create social media campaigns to spread awareness around cannabis use. In collaboration with other organizations such as The Social Changery and Sun Street Center the agency has been able to reach many adolescent students from ages 12-20. The program is funded by Prop 64, and is supported by the public prevention branch of the Health Department. Attending community events gives us the opportunity to reach out and educate our communities on cannabis information and safe use. The program has incentive materials such as pencils, tote bags, lanyards and water bottles to get people's attention and stop by our booth. From there the agency will talk to engaged community members about their knowledge on cannabis as well as provide informational pamphlets on cannabis. The Cannabis Education Program's goal is to inform and educate communities such as under age children, parents, young adults and law enforcement on cannabis rules and regulations and safe usage. Monterey County has a total of 16 licensed cannabis dispensaries (including the unincorporated areas), although many dispensaries are concentrated in popular cities such as Seaside and Salinas, there is a large community that takes part in cannabis (*Cannabis Education, 2023*). The agency aspires to educate people enough for them to make an informed decision on cannabis use (*Cannabis Education, 2023*).

Problem Model

Contributing Factors	Problem	Consequences
Lack of Research	Uneducated cannabis use	Cannabis related deaths
Misinformation		Developmental issues
Lack of laws and regulation		Addiction

Identify a social problem

One of the biggest problems surrounding cannabis use is uneducated use among all ages, the lack of funding, regulation and access to cannabis all create barriers to conduct research (*Conducting Cannabis Research NCBI Bookshelf, 2017*). Due to the fact that cannabis has become legalized relatively recently there are many consumers who do not know the legal do's and don'ts surrounding the substance. There are still rumors, controversies and flat out myths surrounding cannabis that can skew the perception of uneducated consumers. A survey conducted by the cannabis education program concluded that around 57% of users in Monterey County don't feel educated enough in the subject to form their own educated opinions about cannabis use (Cannabis Education Survey 2022). The rest of the population of cannabis users rely on dispensary workers and internet news articles to provide them trustworthy information such as short or long term side effects and potential health benefits (*Cannabis Education, 2023*). These common misconceptions of cannabis law and uneducated substance use results in multiple life threatening consequences such as cannabis related deaths, birth deformities and adolescent developmental issues and addiction.

Many people expect cannabis to not have many side effects since it has been deemed a legal recreational substance in many parts of the United States. Ochayon concluded

that although there can be health benefits in specific situations such as increasing appetite, reducing physical pain as well as helping aid in sleep. Although there are common long term side effects consisting of addiction, negative impact on learning ability, psychosis and suicidality (Ochayon et al., 2020). Due to the recent legalization, people can be flooded by the new information surrounding cannabis that they do not know what to believe. Resulting in people feeling they can cherry pick information they like to hear while dismissing unappealing information that could be true. A study done by Ochayon and others highlights the expectations versus reality when it comes to short term and consistent cannabis use.

Identify contributing factors

Lack of Research

Cannabis's recent recreational legalization in 2016 as well as its consistent status of being a schedule 1 substance heavily aids in the misconception of the substance. Before its recreational legalization not much research has been done surrounding the short and long term effects of the substance. Due to its schedule 1 substance classification research has been difficult to conduct (*Drug Fact Sheet: Marijuana/Cannabis*, 2020). Schedule 1 substances are deemed an addictive substance, with a high potential for abuse by consumers. According to the Department of Drug Enforcement Administration (DEA) Schedule 1 substances can be seen as unethical to research on human subjects because of its addictive nature and possibility of abuse (*Drug Fact Sheet: Marijuana/Cannabis*, 2020). Although there has been minimal research done on cannabis there is not enough to provide convincing and concrete evidence to influence the general public. People have been forced to rely on dispensary education, public news outlets and state or county regulation. The National Library of Medicine states that the federal government continues to

enforce strict laws and regulations on the research pertaining to health benefits or harms of cannabis use and products in many non legalized states (*Challenges and Barriers in Conducting Cannabis Research - The Health Effects of Cannabis and Cannabinoids - NCBI Bookshelf*, 2017).

Lack of Addaptin in Laws and Regulations

Much like alcohol and other substances, it is not safe to drive while under the influence of cannabis. Cannabis significantly reduces a consumers reaction time and problem solving ability as well as impairs physical ability (Huestis 2018). Cannabis laws have been merely adopted and influenced by alcohol regulation laws. A common problem in cannabis laws is testing if someone is driving under the influence of cannabis. A common way to detect if someone uses cannabis is by a urine test however it can come with many discrepancies. Cannabis can stay in a user's system for up to a month, resulting in a difficulty identifying if someone is currently under the influence of if they are just a consistent user (Wagener, 2022). Police officers commonly use a physical sobriety test when investigating a DUI. The test is almost exactly like the alcohol test (walking in a straight line and following directions, etc.) however, the problem is cannabis affects consumers very differently than alcohol does. Cannabis particles can also be contracted through second or third hand smoke. This could come up as a positive substance test however the testis may not be inebriated at the time and was unaware they had ingested second or third hand smoke (Kahan, 2019).

Misinformation

There has been an increase in interest of non-prescribed cannabis to treat specific ailments by age individuals. Now that cannabis dispensaries are open to the public, people see prescription cannabis from a doctor as an unneeded extra step (Blakea A et al, 2019). This can be

a benefit for someone who is well researched on what they want or need however, this can be a negative to those who will treat budtenders as doctors looking for answers and cures. People self diagnosing themselves with ailments and then treating said ailments with cannabis could result in negative effects such as dependency or a distrust in the cannabis industry. They may even avoid going to see a licensed doctor because they feel they can treat themselves with cannabis. If a woman seeks treatment for their nausea with cannabis, there could be harm in not knowing the cause of the nausea. If the nausea is related to an unknown pregnancy then there could be harm in prenatal development if cannabis is being used as a treatment (*Pregnancy | Health Effects | Marijuana | CDC, 2020*).

Identify consequences

Cannabis Related Deaths

Cannabis can have many intense effects on the human body resulting in a euphoric feeling that many people are consuming. However, this feeling can be a detriment to human lives if in affect in the wrong situation. Driving under the influence of cannabis is illegal and can result in a DUI (driving under the influence). Cannabis can slow the users reaction time, induce sleep and significantly shorten the users attention span (Huestis 2018). All effects that can be deadly if paired with operating heavy machinery, specifically a vehicle on the road. Not only is the user putting the lives of themselves and possible passengers in the car at risk but also other sober drivers on the same road. Not being able to make quick decisions in an emergency situation can lead to a car collision or car crash. Reckless driving habits and aggressive driving can also be associated with intoxicated driving (Richer et al., 2009). There has been a dramatic increase in DUI's and co use of alcohol and cannabis, especially at night. Those driving under the influence can result in fatal car collisions, increasing the death rate of automobile accidents.

In Colorado there has been an increase of around 18% of injury crashes and 1.5% increase in fatal crashes while Oregon had an increase of 4% fatal crashes, Both states where cannabis has been legalized (*Legalization of Marijuana Linked to an Increase in Traffic Crashes and Deaths*, 2022).

Developmental Issues

The use of cannabis by pregnant women can be a detriment to the developing fetus . The main psychoactive chemical in cannabis is THC which bonds to fat cells in the body. The THC chemical is distributed throughout the bloodstream resulting in the famous euphoric effect. However that chemical is also transferred to the developing fetus through the blood brain barrier. THC can have a negative impact on prenatal development resulting in dramatically low birthweight, physical deformities, negative mental development and stillbirths (Gunn et al., 2016). Not only are prenatal development impacted by cannabis use but also adolescent usage can have a detriment in childhood development. Especially nowadays with convenient methods of cannabis consumption such as vapes and edibles, children in school are at an increased risk of being exposed or addicted to the substance. Heavy and or consistent cannabis can have negative effects on both behavioral and neurobiological development. The abuse of cannabis at a young age or by a pregnant woman has a high chance of developing neurobehavioral alterations and or neuropsychiatric disorders later in life (Martin B.R et al., 2008).

Addiction

The legalization of cannabis has created a perception of the substance as not harmful since it is legal to use recreationally. However what many people fail to realize is that although it has been legalized it is still an addictive substance and classified as a schedule 1 substance by the

FDA. A survey conducted by the Monterey County Cannabis Education Program concluded that only half of Monterey County recognized cannabis as an addictive substance (*Cannabis Education*, 2023). Just because it is a recreationally legal substance in many states does not mean that it has no side effects or dependency issues. Consistent cannabis use can alter the brain chemistry in humans to produce artificial levels of serotonin upon consumption. Consistent use can restrict natural production of serotonin, having to rely on the consumption of cannabis to produce, resulting in the feeling of dependency of the substance (Baltz, 2020). This reaction is where the common perception of “stoners” comes from, the lack of joy or motivation in previous stimulating activities due.

Working Title

Better Budtender Education

Project Description

Provide an educational course for people who work in dispensaries and sell cannabis (budtenders). By contacting local cannabis dispensaries and distributing a powerpoint presentation in video form. The presentation will touch on topics such as safe use, safe storage, not trying to prescribe but recommend, difference between consumption methods, and dangers of overconsumption. Remind them that they are not doctors or medical professionals so they cannot prescribe cannabis for treatment, not to sell to pregnant women, people under age, military or federal government personnel and remind them not to drive while under the influence, not to cross substance usage. This educational training video will be distributed to dispensaries to show to their budtenders. Budtenders who view the training will become a more factual source for uneducated consumers to ask questions or get advice.

Project Justification

The purpose of this project is to remind budtenders that they are not doctors or medical professionals, therefore they cannot prescribe cannabis for treatment. As well as educate them in hopes that they educate others on safe use and safe practices. The agency hopes to accomplish a lower rate of pregnant womens cannabis use, DUI rates, and widespread education within Monterey County. By providing this presentation dispensaries can help educate people at the source of legal cannabis purchases. By education dispensary workers hope to create an educational safe haven for curious consumers or citizens to find out factual information related to cannabis. The agency also hopes to debunk all rumors and misinformation related to the substance so that people can feel confident in their choice to participate in cannabis use or not.

Through the distribution of this video presentation the agency hopes that there will be less misinformation surrounding the topic of cannabis. People will have a better understanding of safe cannabis use, laws and regulations surrounding the substance as well as have reliable sources to contact if they have any questions or concerns. Viewers of the presentation will be able to better educate the community on safe use, safe storage, the dangers of overconsumption as well as when and when not to recommend cannabis use. Solidifying that cannabis is a substance that can be taken safely in a controlled environment and for recreational use, however not when driving or operating machinery. By educating those who sell cannabis the agency can communicate with cannabis consumers directly through the cannabis industry. Educating budtenders allows them to correct any communicated misinformation and remind consumers of laws and regulations.

The proposed presentation meets best practice standards of the Monterey County Cannabis Education Program by educating the public on safe use, safe storage and factual information related to cannabis. Our mission is to educate people enough to where they feel

informed enough to make their own decision related to cannabis use. The project has been approved and reviewed by Monterey county public health prevention specialists and program supervisors.

Benefits

The proposed project will build a confidence in dispensary workers to relay information to consumers who have any questions related to cannabis. The budtenders will know factual information on consumption methods, how differently they may affect people and the recommended time to wait before operating a vehicle. Consumers of cannabis will have reliable sources to ask questions to as well as become educated on safe practice, safe storage and the legal do's and don'ts of recreational cannabis. Through this public education the agency hopes to reduce cannabis related crimes, injuries and fatalities as a whole, making the county a safer place to travel and live.

Results

Distributing the Better Budtender Training to participating dispensaries, dispensaries will now have an educational training they can use and distribute to their employees at their will. The agency will then age how effective the training is through a post assessment survey conducted at the end. The assessment is implemented to gauge the effectiveness of the training, participation as well as an opportunity for participants to give feedback on how the training can be improved. Through this educational training dispensaries and budtenders will have a better understanding on cannabis related topics such as safe use, safe storage, overconsumption and co-use. The Better Budtender Training is continuously being distributed and improved upon through feedback received from a post assessment survey taken at the end of the training.

The project was distributed to one participating cannabis dispensary. Data gathered from the post assessment survey were minimal. The agency had 20 participants start the survey however 5% of participants completed the assessment from one cannabis dispensary. The measurable outcomes we expected to see through the post assessment survey were overall how much the participants learned about safe cannabis use as well as how ready they feel after this training they are to educate on safe cannabis use. The 5% completed assessments concluded although they did not learn much from the presentation, they feel very confident in education on safe cannabis use.

The project did achieve the agency's goal by distributing an educational training to a dispensary that is available for them to use. However, to gain a better understanding of how effective it can be, we would like to distribute the training to a much bigger audience such as more dispensaries as well as more budtenders to gain a better understanding of how useful the presentation is as well as how already educated the community is on cannabis use. Unfortunately there was not enough data to represent as a chart. With a large distribution we can educate more people as well as improve the implantation and project, removing the problem of uneducated cannabis use and hopefully removing some of the negative stigma around the substance.

Conclusion and Reflection

The Better Budtender's Training should continue to be implemented, distributed and improved upon in the future. A larger distribution to dispensaries and communities will be a huge benefit to the development of this project as well as a great educational help to the community. Collaboration with more than one dispensary as well as other branches of public health could rocket this project into an even greater end goal. New perspectives and collaborations would be a huge benefit to the acceptance and implantation of this kind of

information. As time goes by there will hopefully be more factual evidence supporting or dismissing claims on cannabis that we can use to educate the cannabis community. It would be beneficial to the project's post assessment survey if the presentation was done in person so that participants can fill out the survey in real time and ask questions to the presenter if they have any concern. Incentive items such as gift cards could also increase the completion rate of the post assessments so that the agency can have more data to reflect on.

Unfortunately the project faced some backlash and resistance from cannabis dispensaries due to it stating "bold claims on cannabis use during pregnancy" however, as part of the health department we aim to educate on the side of caution. Although the project was revised with the dispensaries feedback implemented, we walk a fine line between education and discouragement. The Health Department does not state anyone should or shouldn't use cannabis in a non illegal situation although the agency will inform there may be consequences to cannabis use in specific situations.

Implementation plan

The cannabis curriculum education is a presentation that has been developed through research using sources such as the CDC, motor vehicle transportation laws of various states, research papers as well as information collected by the Monterey County Cannabis Education Program. Existing research has been conducted on topics such as cannabis effects on pregnant women, consumption methods and military restrictions. New research was conducted focusing on overconsumption, co-use, driving under the influence and safe storage. The presentation will be distributed to local cannabis dispensaries that will touch on topics such as safe use, safe storage, overconsumption and co-use of cannabis and alcohol. The presentation will be conducted and recorded by the cannabis program and distributed to any participating

dispensaries. The presentation will be a required training for dispensary employees. All participants involved in this project are Michelle House, Andrea Estrada, local cannabis dispensaries and myself. Michelle and Andrea have been involved by reviewing and giving constructive feedback on presentation drafts as well as helped with contact between the cannabis education program and cannabis dispensaries. Materials and services required to develop this presentation are meeting agenda, research, grant requirements, dispensary outreach, focus groups, a laptop, feedback and reviews, and assessment template.

Task	Timeline	Parties Involved	Materials/ Services Needed	Deliverables
Attend planning meeting	January 1st	Michelle House	Meeting agenda	Capstone ideas
Concrete ideas to cover on presentation	Jan 10th	Michelle House	Research, grant requirements, outreach to dispensaries	N/A
Draft presentation	Jan 17th	Michelle House, Andrea Estrada	Laptop, focus group, feedback	Presentation
Revise presentation	Feb 20th	NA	Laptop	Presentation
Presentation feedback	March 1st	Michelle House, Andrea Estrada	Laptop	Presentation
Dispensary outreach for participants	March 10th	Local dispensaries	Laptop	Emails, volunteers
Post assessment draft	March 17th	Michelle House, Andrea Estrada	Laptop, assessment template	Post assessment
Final presentation	April 19th	Dispensaries	Laptop,	

Expected Outcomes

Participating dispensaries will have an educational training, 50% of participants will have an increased knowledge of cannabis education.

Assessment Plan

Participating cannabis dispensaries will be given educational training presentations for their budtenders. After the presentation the agency will have a QR code leading to a post assessment survey to gauge how much they feel they learned. The assessment will consist of mainly open ended questions such as what was the best part, worst part, and what would you change about the presentation. The agency will also have two closed ended questions such as “Overall how much did you learn about cannabis use; Not much, I learned a few things, I learned a lot,” as well as “After this training how ready are you to educate others on safe cannabis use; Not ready, Somewhat ready, Very ready.” From this post assessment the agency will compile how well the training works as well as get feedback on what the agency can improve upon for future use.

References

Health Department. (2015, February 24). Monterey County. Retrieved February 27, 2023, from

<https://www.co.monterey.ca.us/government/departments-a-h/health>

A. BlakeaPersonEnvelopeMeganRossbUgonnalhenachocLizzetteFigueroadEmilySilversteindDin
marijuana.MethodsCross-sectional . (2019, September 9). Non-prescription cannabis use
for symptom management amongst women with gynecologic malignancies. *Gynecologic
Oncology Reports*. Retrieved December 11, 2022, from

<https://www.sciencedirect.com/science/article/pii/S2352578919300864>

Baltz, J. W. (2020). *Serotonin Syndrome versus Cannabis Toxicity in the Emergency Department*.
NCBI. Retrieved February 13, 2023, from

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7220016/>

Cannabis Education. (2023). Monterey County. Retrieved February 13, 2023, from

[https://www.co.monterey.ca.us/government/departments-a-h/health/public-health/cannabi
s-education#cannabis](https://www.co.monterey.ca.us/government/departments-a-h/health/public-health/cannabis-education#cannabis)

Cannabis use disorder: Epidemiology and management. Taylor & Francis. (n.d.). Retrieved
December 11, 2022, from

<https://informahealthcare.com/doi/full/10.1080/09540260902782745>

Challenges and barriers in conducting cannabis research. (2017). Retrieved April 19, 2023, from

<https://www.ncbi.nlm.nih.gov/books/NBK425757/>

Drug Fact Sheet: Marijuana/Cannabis. (2020). DEA.gov. Retrieved February 13, 2023, from

https://www.dea.gov/sites/default/files/2020-06/Marijuana-Cannabis-2020_0.pdf

Gunn, J. K. L., Rosales, C. B., Center, K. E., Nuñez, A., Gibson, S. J., Christ, C., & Ehiri, J.

- E. (2016, April 1). Prenatal exposure to cannabis and maternal and child health outcomes: A systematic review and meta-analysis. *BMJ Open*. Retrieved December 11, 2022, from <https://bmjopen.bmj.com/content/6/4/e009986>
- Huestis M., Hartman L. *Academic.oup.com*. (2018). Retrieved April 18, 2023, from <https://academic.oup.com/clinchem/article/59/3/478/5621997>
- Isabelle Richer, Jacques Bergeron, & Abstract Driving under the Accident Analysis & Prevention. Retrieved December 11, 2022, from <https://www.sciencedirect.com/science/article/abs/pii/S0001457508002376>
- Kahan, M., Srivastava, A., & Clarke, S. (2019, December 1). Cannabis Industry and Medical cannabis clinics need regulation. *The College of Family Physicians of Canada*. Retrieved December 11, 2022, from <https://www.cfp.ca/content/65/12/864>
- Legalization of Marijuana Linked to an Increase in Traffic Crashes and Deaths*. (2022, August 31). *SciTechDaily*. Retrieved February 13, 2023, from <https://scitechdaily.com/legalization-of-marijuana-linked-to-an-increase-in-traffic-crashes-and-deaths/>
- Martin B.R., Manzanares J., Macleod J., Leech S.L., Kumar A.M., Kosterlitz H.W., Kamon J., Jones K.L., Hutchings D.E., Huizink A.C., ... Beltramo M. (2008, March 18). Cannabis and the developing brain: Insights from behavior. *European Journal of Pharmacology*. Retrieved December 11, 2022, from <https://www.sciencedirect.com/science/article/abs/pii/S0014299908002999>

Ochayon, L., Spiro, H., & Kadmon, I. (2020). *Expectations versus reality: Improvement of symptom control and quality of life of oncology patients using medical cannabis*. HSPI.

Retrieved February 13, 2023, from <https://www.heighpubs.org/hjncp/cjncp-aid1024.php>

Pregnancy | Health Effects | Marijuana | CDC. (2020). Centers for Disease Control and Prevention. Retrieved February 13, 2023, from

<https://www.cdc.gov/marijuana/health-effects/pregnancy.html>

Wagener, D. (2022, September 13). *How Long Does Marijuana (Weed) Stay in Your System?*

American Addiction Centers. Retrieved February 13, 2023, from

<https://americanaddictioncenters.org/marijuana-rehab/how-long-system-body>