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# MEDICAL CANNABIS USAGE IN PEDIATRIC PATIENTS WITH CHRONIC PAIN AND DISEASES

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## Introduction

Pain is an unpleasant sensation that causes mild to severe physical/emotional discomfort (Merriam-Webster, 2023). People often experience acute pain with a sudden onset that goes away once they've healed. Some types of pain are persistent; this is called chronic pain. Chronic pain can be defined as pain that extends beyond the expected healing period (Freidrichsdorf et al., 2016). There are different classifications: nociceptive (sensation), neuropathic (dysfunction of nerves), and idiopathic pain (no known cause). Many epidemiological studies show pediatric chronic pain has increased over the years, negatively affecting the everyday tasks of children and their families (Banerjee & Butcher, 2020).

Medical marijuana has been increasingly used over the past years. The two synthetic cannabis-related drug products that the Food and Drug Administration, FDA, has approved are nabilone and dronabinol. They have a complete effect on the central nervous system through interaction with the cannabinoid receptor system. Nabilone has an antiemetic effect that helps chemotherapy patients (FDA, 2006). Dronabinol is widely used for its appetite stimulant and antiemetic effect. These drugs helped treat AIDS-related anorexia and chemotherapy-induced vomiting (FDA, 2004). These trials likely consisted of only adult patients.

There have been several studies regarding medical cannabis and pain control, however, few of them are with minors. The studies that do exist mainly revolve around chemotherapy. The purpose of this study is to explore the impact that medical cannabis has on pediatric chronic pain and diseases.

## References:

Friedrichsdorf, S., Giordano, J., Desai Dakoji, K., Warmuth, A., Daughtry, C., & Schulz, C. (2016). Chronic Pain in Children and Adolescents: Diagnosis and Treatment of Primary Pain Disorders in Head, Abdomen, Muscles and Joints. *Children*, 3(4), 42. <https://doi.org/10.3390/children3040042>  
Banerjee, S., & Butcher, R. (2020). Pharmacological Interventions for Chronic Pain in Pediatric Patients: A Review of Guidelines. In *PubMed*. Canadian Agency for Drugs and Technologies in Health. <https://www.ncbi.nlm.nih.gov/books/NBK563527/>

## Hypothesis

Medical cannabis helps treat treatment-resistant chronic pain and other chronic diseases.

## Method

**Sample:** 100 Bay Area Pediatric patients who are 3-12 years old and who have been diagnosed with a chronic disease or are experiencing long-term chronic pain or both. Criteria are not exclusive to race, ethnicity, and gender.

**Method:** Flyers will be posted around the office that has been partnered with. Patients will rate their day-to-day pain using the Wong-Baker Faces Pain Rating Scale. Parents will answer three questions. (1) How often does your child's pain interact with their daily activities? (2) Please rate the effectiveness of the current treatment in managing your child's chronic pain? (3) How would you rate your child's overall mood/well-being? The responses will be measured using a five-point Likert Scale. After four weeks, the patients will re-rate their pain and parents will re-answer the same questions. The new responses will use the same scales.

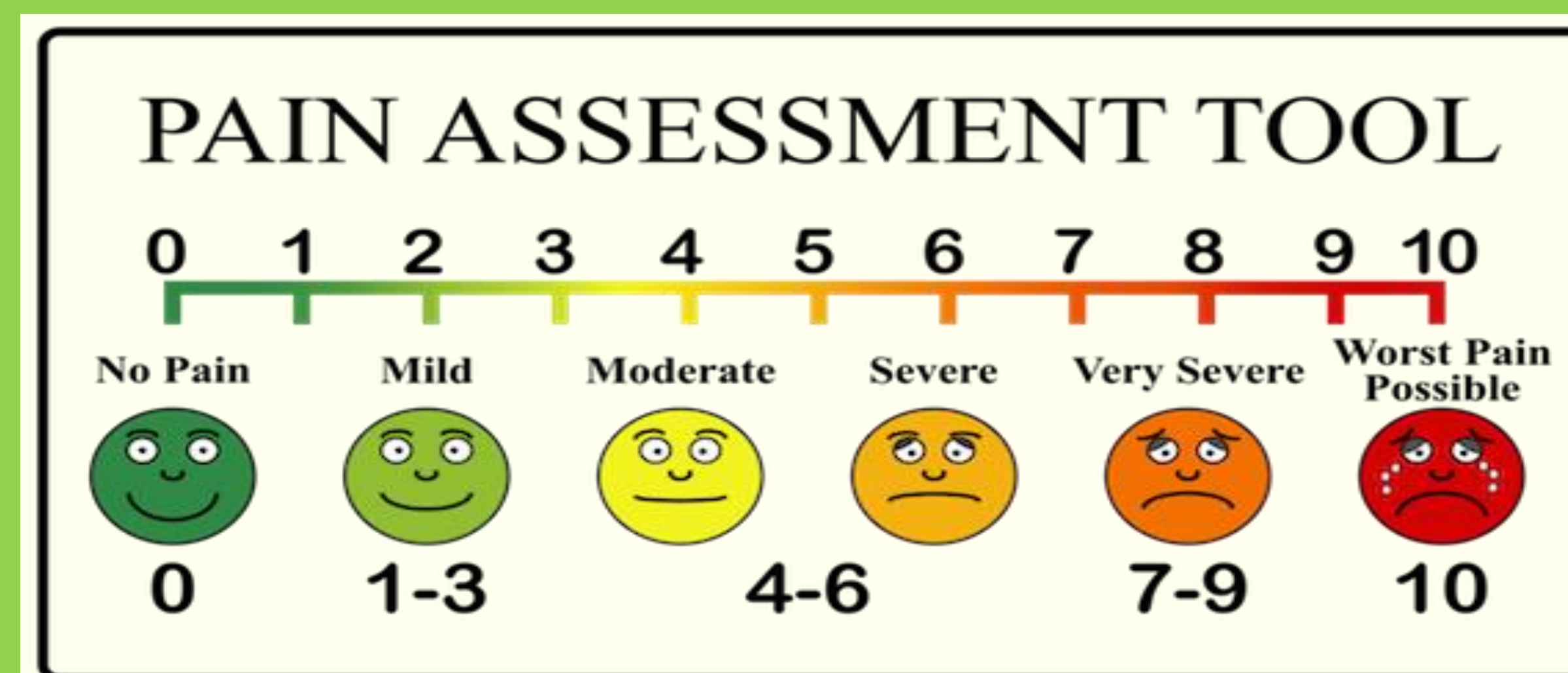
**Study Design:** Quantitative, test-retest.

## Results

Results will show that medical cannabis improved the patients' day-to-day pain. Parents will also see a difference in their child's mood and behavior. The results determine that medical cannabis is an effective intervention for chronic diseases and long-term pain management in pediatric patients.

## Conclusions

Pain levels decrease with the use of medical cannabis. We hope that these findings will influence parents and doctors to provide medical marijuana as an option for pain management. In future studies, researchers can also evaluate different responses to marijuana between genders. Additionally, various races and ethnicities' responses to the use of medical marijuana can be studied. Understanding how medical marijuana improves the lives of children who experience chronic pain will allow children to live healthier lives.



Never	Rarely	Sometimes	Often	Very Often
Very Poor	Poor	Fair	Good	Very Good
Awful	Not Well	Neutral	Well	Great

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Pending IRB approval