The Correlation between Cannabis Use and Suicidal Ideation: A Literature Review

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Group 750

INTRODUCTION

Background

- Cannabis, also known as marijuana or weed, is widely used worldwide, with changing legal status and social acceptance, leading to increased accessibility. In the United States, it's the most commonly used federally illegal drug, with around 48.2 million users in 2019[1].
- The mechanism of action of cannabis is on the CB1 and CB2 receptors which are linked to reward, memory, learning and pain[12,13].
- An analysis of survey data from more than 280,000 young adults ages 18-35 showed that cannabis use was associated with increased risks of suicidal ideation, suicide plan, and suicide attempt. These associations remained regardless of whether someone was also experiencing any other disease condition[14].
- There's a growing concern about potential links between cannabis use and mental health issues like suicide risk, prompting research into this relationship. Understanding this relationship is crucial for public health policymakers, healthcare providers, and the general population.

Study Objectives

- Primary endpoint: Assessing the link between recreational cannabis use and suicidal ideation (SI) among cannabis users.
- Secondary endpoints: Examining how recreational cannabis use, along with mental health disorders like Depression and Bipolar Disorder, how these influences SI. Also, investigating the relationship between cannabis use and SI compared to other substances.

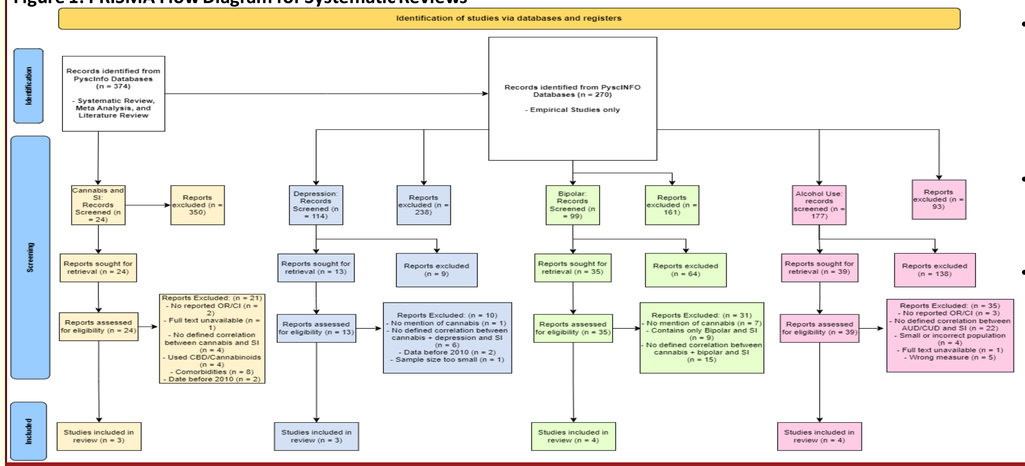
METHODS

- One search was completed on 2/17/24 through PsycINFO using the search terms: Cannabis AND ((Suicidal Ideation) OR Suicide) - 374
- Articles were then categorized, screened, and assessed for eligibility in four arms: (Fig. 1)
  - Cannabis and SI – Including Literature Reviews, Meta Analyses, and Systematic Reviews
  - Cannabis + Depression and SI – Empirical studies
  - Cannabis + Bipolar and SI - Empirical studies
  - Cannabis vs. Alcohol and SI - Empirical studies
- Articles pertaining to Cannabis + Depression and SI, Cannabis + Bipolar Disorder and SI, and Cannabis + Alcohol and SI were screened and assessed for eligibility using the same methodology as Cannabis and SI. (Fig. 1). However, we focused on empirical studies, rather than literature reviews, for comorbid conditions with cannabis use.
- Odds Ratio / Hazard Ratio and regression analysis comparing cannabis use vs. non-cannabis use and the risk of suicidal ideation across different disorders were tabulated or converted to Forest Plots.

Inclusion Criteria	Exclusion Criteria
Articles must contain cannabis use and SI	Articles lacking cannabis use or SI
Double-Blind Studies, Peer-reviewed research articles, systematic reviews, meta-analyses, and literature reviews	Narrative reviews, Editorials, Expert opinions
Recent articles (≥ 2010)	Past articles <2010
SI evaluated by standardized assessments, scales, or questionnaires	Small sample size (n < 300)
English and Full Free-Text	

METHODS (cont.)

Figure 1: PRISMA Flow Diagram for Systematic Reviews



- A systematic literature review was performed using the PsycINFO database and handsearching.
- The methodology was illustrated using PRISMA Flow Diagram.
- Handsearching identified one article through pre-liminary searches via PubMed using the existing inclusion/exclusion criteria.

RESULTS

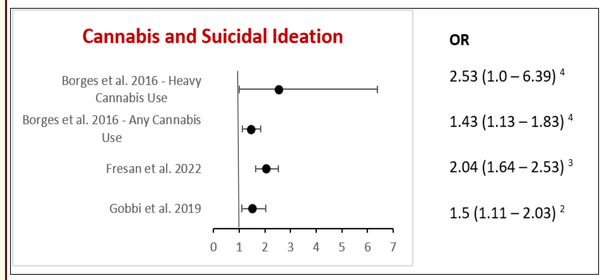


Figure 2: Cannabis and Suicidal Ideation forest plot

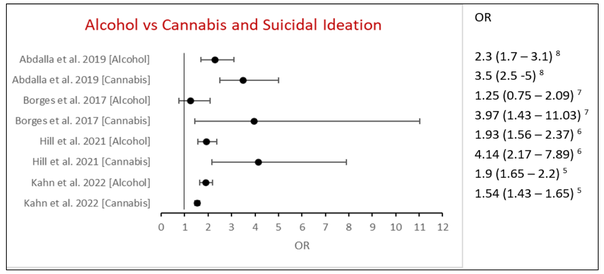


Figure 3: Alcohol vs. Cannabis and Suicidal Ideation forest plot

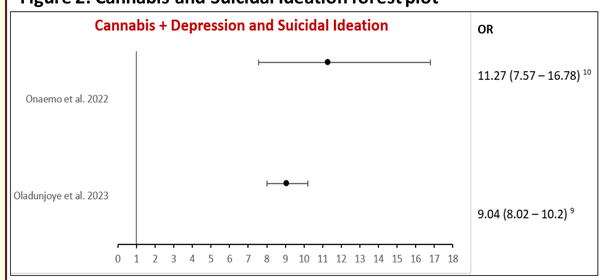


Figure 4: Cannabis + Depression and Suicidal Ideation forest plot

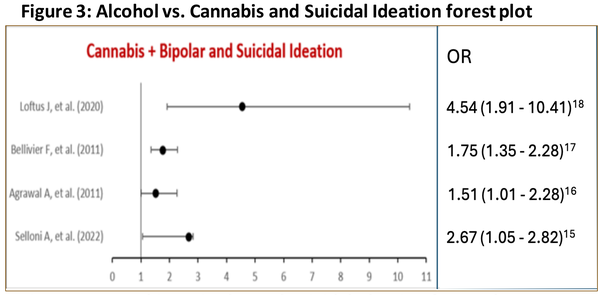


Figure 5: Cannabis + Bipolar and Suicidal Ideation forest plot

- **Depressive symptoms was significantly** associated to **suicidal ideation** (p-value < 0.0001) among **cannabis users**
- Additionally, the t-test showed **significance** with a value greater than or equal to 1.96; inferring that the **depression symptoms significantly predicted suicidal ideation** among cannabis users[11].

CONCLUSIONS & Discussion

Analysis Reveals:

1. Comparable Risk to Alcohol Use
2. Depression and Cannabis Use: Highest Risk
3. Increased Risk of Symptoms Associated with Bipolar
4. More Studies Needed: Dose and Duration
5. Inform Clinical Decisions and Health Policies

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ACKNOWLEDGEMENTS

- Thank you to our project advisor, Dr. Franson; and to Dr. Chatfield for continued guidance with our project.