

Effects of cannabis use on suicidal ideation among adults with history of major depressive episode

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Objective

The current study examines the interaction effects between cannabis use and history of a major depressive episode (MDE) on suicidal ideation among adults ages 18 and older, after adjusting for potential confounding factors such as sex, race, age group, and employment status.

Background

A recent study on the association of suicidality with marijuana use found that between 2008 and 2019 the number of adults with past year cannabis use more than doubled [1]. During the same time period, there were also increases in the number of adults who thought about, planned, or attempted suicide and in the number of adults who reported MDE. The association of MDE with suicidal ideation is well established; however, cannabis use can complicate this association.

Study Design

This cross-sectional study employs univariate and multivariate logistic regression analyses to examine association between MDE and suicidal ideation among U.S. adults 18 years old and older, adjusting for cannabis use and demographic variables.

Population Studied

The 2022 National Survey on Drug Use and Health (NSDUH) of adults 18 years old and older, conducted by the Substance Abuse and Mental Health Services Administration.[2]

- Among adults ages 18 and older, an estimated 24.6% (62 million) reported using marijuana 1-2 times per week, 8.6% (21.5 million) reported a past-year history of MDE, and 5.4% (13.8 million) had thought about, planned, or attempted suicide in the past year.
- After adjusting for age, sex, race, employment, marijuana use, past-year history of MDE, and interaction between history of MDE and marijuana use, past-year history of MDE was strongly associated with increased risk of suicidal ideation ($aOR=4.9$, $p<0.0001$).
- The same model predicted marijuana use 1-2 times per week was associated with a protective effect against suicidal ideation ($aOR=0.8$, $p=0.01$).
- However, this protective effect does not hold among adults with a past-year history of MDE, for whom marijuana use was associated with significantly increased risk of suicidal ideation ($aOR=1.3$, $p=0.001$).

Findings

The current study shows that any history of MDE is positively associated with increased likelihood of suicidality, especially a past year history ($aOR=4.8$, $p<.0001$). Young adults ages 18-34 are more likely to have suicidal ideation, compared to adults 65 and older ($aOR=2.2$, $p<.0001$). We also found a significant association between sex and suicidal ideation with and without MDE. On average, females have a slightly lower risk of suicidal ideation, compared to males ($aOR=0.9$, $p=0.03$). Race also plays an important role in suicidal ideation. Compared to Whites, Black/African Americans are more likely ($aOR=1.2$, $p=0.008$), while Hispanics are less likely ($aOR=0.8$, $p=0.04$), to experience suicidal ideation.

Conclusions

The effect of marijuana use on suicidal ideation is complicated. It can be protective in the general adult population, helping to lower the risk of suicidal ideation. However, in the presence of a history of MDE, marijuana use can potentially increase the likelihood of suicidal ideation, particularly among younger adults (18-35), males, and Black/African Americans.

Implications

When prescribing medical marijuana, physicians need to consider mental health status, especially in adults with a history of at least one major depressive episode.

References

[1] Han B. Associations of Suicidality Trends With Cannabis Use as a Function of Sex and Depression Status. *JAMA Network Open*. 2021; 2021;4(6):e2113025. doi:10.1001/jamanetworkopen.2021.13025

[2] HHS Publication No. PEP23-07-01-006, NSDUH Series H-58: Key substance use and mental health indicators in the United States: Results from the 2022 National Survey on Drug Use and Health. Center for Behavioral Health Statistics and Quality, SAMHSA. <https://www.samhsa.gov/data/report/2022-nsduh-annual-national-report>

