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Commentary

Bong Appetit: Are Cannabis users Physically Healthier than Non-users?- Evaluating the Paradoxical Association between Cannabis Use and Health

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ABSTRACT

This is a short commentary on a research article by Ray M Merrill published in the journal *Cannabis and Cannabinoid Research* on 19th August, 2024, which reported that cannabis use among US adults was associated with better physical health parameters (body weight and Body Mass Index-BMI). The research findings were reported by several media agencies in the following weeks and also led to various online discussions on the supposed paradoxical relationship found between cannabis use and physical health. Generally, cannabis intoxication is associated with overeating and other unhealthy habits, and cannabis abuse/dependence is also regarded akin to other drugs and their various negative physical and mental health consequences. However, there has not been convincing research evidence on the true extent of the association between cannabis use and physical health. The paradoxical findings of the study and general perceptions of health effects of cannabis have been discussed in light of recent research evidence in this article. The association of cannabis use and better physical health has been documented for few decades, and in recent years, there has also been promising evidence on the clinical/medicinal utility of cannabis derivatives for various chronic diseases and wellness issues. Due to these purported effects, perceptions towards cannabis have significantly changed in most societies. The prevalence of cannabis use has also rapidly increased in recent years as more countries are legalizing recreational cannabis use. Without knowing the full extent of the effects of cannabis use on physical health, it can become a serious public health issue in the future.

Keywords: *Cannabis, Marijuana, Cannabis use, Health, Physical health, Mental health, Body Weight, Body Mass Index*

A research article published recently in the *Cannabis and Cannabinoid Research* journal titled 'A National Survey of Marijuana Use Among U.S. Adults According to Obesity Status, 2016–2022' reported that cannabis use was associated with lower Body Mass Index (BMI) or obesity rates among adults in the US (Merrill, 2024). The article by Ray M. Merrill published on 19th August, 2024 is based on the findings from 735,921 adults who were part of the nationwide Behavioral Risk Factor Surveillance

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System (part of Centers for Disease Control and Prevention- CDC) between 2016 and 2022. The finding that prevalence of cannabis use was 35 percent lower among obese participants than non-obese ones was picked up and reported in the following weeks in a number of news agencies and cannabis centered media houses such as *MSN*, *Marijuana Moment*, *Born2Invest*, *BenZinga*, *Mugglehead Magazine*, *Times of Cannabis*, etc. In the general community forums and social media posts associated with those websites, readers found the study results particularly surprising since cannabis use is generally associated with overeating (or munchies) during intoxication and also of cannabis users being lazy and impulsive or undisciplined with food and sanitation. In regard to the study as well, people generally assume the opposite relationship between cannabis use and body weight/BMI; that cannabis users would generally be worse off. However, the study's finding that cannabis use is associated with better physical health parameters is not novel and the perplexing association between cannabis use and body weight and physical health in general has been documented in scientific literature for at least two decades now.

Cannabis (and its derivatives) is the most widely used illicit substance in the world with 219 million users in 2021 (Johnston et al., 2019; UNODC, 2023). Cannabis is used in various forms (marijuana, *hashish*, *bhanga*, oil) and it has different connotations across societies (ganja, pot, grass, dope). Cannabis is often regarded as a soft drug and it is gradually being legalized in many countries for medicinal and/or recreational use. The pop portrayal of cannabis use in media generally depicts it as a fun drug that makes people feel good and happy, act silly and also make them hungry. Most people believe that cannabis use leads to overeating and this has even led to its supposed utility in treating eating disorders and other issues related to low body. While there is some evidence that cannabis helps improve appetite and body weight among low weight individuals, the same is not true for individuals who are not underweight (Sansone & Sansone, 2014). There have been a number of research studies in the previous two decades, which have repeatedly found the same association between cannabis use and body weight/BMI; that individuals with obesity/high BMI have significantly lower cannabis use (lifetime or current) than nonobese or physically fitter people. This includes a national nutritional survey of 14,000 youths (Smit et al., 2007), a 15-year longitudinal study among 3,617 young adults (Rodondi et al., 2006), joint national epidemiological studies covering 52,000 youths (Le Strat et al., 2011; Alshaarawy et al., 2019), and another longitudinal study of 2,566 youths (Hayatbaksh et al., 2010). A number of meta analyses and systematic reviews have also confirmed this finding as stable evidence rather than a chance occurrence (Clark et al., 2018; Reis et al., 2024). So how come cannabis users are physically healthier than non users?

There are a number of supposed reasons for this phenomenon. Researchers have speculated various biological factors such as regulation of Omega-6/ Omega-3 endocannabinoid precursors in the brain, which can lead to decreased energy expenditure and better physical functioning among cannabis users (The Week, 2015; Fearby et al., 2022). Studies have found that cannabis users generally tended to be more physically active, outdoors more often and eat more fruits and vegetables (contrary to popular beliefs) (Norml, 2023). Others have highlighted the difference between recreational (or acute) and chronic use (or abuse) of cannabis, and in the latter, low body weight could be due to use of other drugs alongside cannabis or the

decrease in salience of food rewards due to drug addiction/dependence (Sansone & Sansone, 2014). Moreover, body weight and BMI are only basic anthropometric indicators of health and use of cannabis (and other drugs) definitely impact physical health in other ways not directly apparent in just body weight. Also, it has to be clearly stated that none of the studies quoted above proved that consuming cannabis causes weight loss (Jaslow, 2011). The findings of most of the studies only meant that people who use cannabis are also more likely to be more physically active, social and open to new experiences such that cannabis use is simply one of many parameters the two groups differ on. Nonetheless, the exact mechanism behind the association between cannabis use and body weight is still under investigation, and it could just be a case of correlation rather than causation. As cannabis use has become legalized in many countries during the previous decade, its recreational use has also sharply increased along with prevalence of cannabis dependence/ addiction (Cannabis User Disorder-CUD) (Connor et al., 2021; Shao et al., 2024). With more users and increasing focus on the cannabis in the public space in recent years, it has also encouraged high number of scientific studies and research projects. With many longitudinal studies on cannabis use running and producing results among various cohorts all over the world, the true extent of the effects of cannabis use on long term physical health is still yet to be fully understood (Godin & Shehata, 2022).

In recent years, cannabis has also emerged as a useful alternative medicine and it has spurred a huge global market for medicinal cannabis products. The products are marketed on their claims of scientific evidence despite there not being convincing research evidence yet (Wilkins, 2006; Sherman & Chin, 2019). Nonetheless, there have been numerous research studies on the utility of cannabis therapy in pain management associated with many physical diseases such as cancer (Blake et al., 2017; Shin et al., 2019; Abrams, 2022). For many chronic and terminal diseases, use of medical marijuana has been associated with improvement in overall life quality and mental health (Lent et al., 2024; Medical Xpress, 2024). Cannabis therapy is also being tested for its clinical efficacy in treatment of epilepsy (Gaston et al., 2018; Franco & Perucca, 2019; Bauer, 2022) and mental disorders (Black et al., 2019; Hoch et al., 2019; Sarris et al., 2020). Overall, there have been positive results for the clinical/ medicinal utility of cannabis. In one interesting new study by Igwe and Alaribe (2024) based on data of 1.6 million hospitalizations during COVID-19, it was found that lifetime cannabis use was associated with significantly lower odds of COVID-19 related hospitalizations, mechanical ventilation, and death compared to those without history of cannabis use. Alongside its increased medicinal use, there has also been a tremendous growth in use of cannabis related/infused products in the wellness sector, and commercial sale of cannabis or CBD (Cannabidiol) based oils, gums, gummies, drinks, etc. has significantly come up in most Western societies where recreational cannabis has been legalized (Miller & Serra, 2024). Cannabis is distinctly known for its two active components of Tetrahydrocannabinol (THC) and Cannabidiol (CBD). THC is known to produce the intoxicating effect whereas CBD is mostly non psychoactive, but still produces a range of positive effects (Grinspoon, 2024; Lo et al., 2024). CBD is known for its calming or relaxing effect and has been found to be useful for a range of wellness or daily life related issues such as stress, insomnia, anxiety, inflammation, appetite, etc. (Kubala, 2023). The wellness potential of CBD and other cannabis related supplements have even been reported by leading health

organizations (WHO; 2018; UNODC, 2020) and many reputed online health sites such as *Global Wellness Institute*, *Healthline*, *WebMD*, *Mayo Clinic*, *USAToday*, etc. Since CBD alone does not seem to have abuse or dependence potential, its expanded use across countries can be expected in the future as cannabis is gradually becoming legalized.

In sum, there is still no definitive conclusion on the association between cannabis use and physical health although there is some promising recent evidence that prevalence of cannabis use, and other positive health behaviors and/or parameters are associated. There has also been recent evidence of clinical/medicinal utility of cannabis as a supplement and/or therapy for chronic diseases and various daily wellness issues. These research findings on effects of cannabis have been encouraging and it is not surprising that cannabis use has increased dramatically in recent years and is also increasingly becoming regarded favorably in non Western countries as well. However, the effects of long-term cannabis abuse or dependence on physical and mental health has still not been fully realized through research studies, and given the increasing legalization and use of cannabis, there is a danger of cannabis becoming the next alcohol or tobacco. The full range of risks and benefits of cannabis and its derivatives need to be fully considered in future policies related to legalization of cannabis for recreational and medicinal purposes.

COMPETING INTERESTS

The author declares that they have no competing interests, financial or otherwise, which would have affected the writing of this article in any way.

AUTHORS' CONTRIBUTIONS

Not relevant since manuscript had single author only.

CONSENT (WHERE EVER APPLICABLE)

Informed consent was not applicable as the manuscript did not deal with any primary data involving humans or animals. Since the manuscript is a commentary, requirements for consent did not apply.

ETHICAL APPROVAL (WHERE EVER APPLICABLE)

Ethical approval was not required since the manuscript did not deal with any collection of primary or secondary data on humans or animals. The study reported was entirely literature based and had no ethical issues.

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