EDITORIAL

Medical marijuana: what are we talking about?

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Since the second half of the 20th century, a global tendency in naturalizing and legalizing the consumption of marijuana has been identified among cultural and economic movements in the Western world. Narratives aiming to decriminalize marijuana in countries where its use is forbidden are discursively unified, under claims that recreational drug use is not harmful to health. Decriminalization would mean legalizing the production, distribution, and consumption of substances currently controlled under international conventions, i.e., for non-medical use.

The article "US adult illicit cannabis use, cannabis use disorder, and medical marijuana laws" published in *JAMA Psychiatry* resurrected the controversy of marijuana legalization. According to this study, the legalization of marijuana has created more than one million users in U.S. states where laws allowing "medicinal use" were approved, compared to states where no such laws have been passed. This study was based on comparing the prevalence of marijuana use and people with mental disorders due to this practice in states where medicinal use is legalized.[1]

According to the U.S. Drug Enforcement Agency, marijuana, one of the many names of *Cannabis sativa*, is a Schedule I substance. By definition, marijuana is a drug with no accepted medical use and a high potential for abuse.[2] Beyond that, it is the most widely consumed illicit drug globally[3]; 275 million people used marijuana in 2019, representing 4% of the global population. Of these users, 10% can be considered dependent. The 18% increase in marijuana users among the global population during the last decade[4] is another alarming fact that concerns and challenges public mental health policy and drug enforcement.[3,4]

In most cases, there is a substantial disconnection between the actual risks of marijuana consumption and the population's perception thereof. Marijuana is considered a harmless drug, and its recreational use has gained popularity among young people.[4] In some parts of the world, products derived from cannabis have also become more potent.[4,5]

Nevertheless, the percentage of young people who realize cannabis is a harmful substance has decreased, despite evidence associating its regular use with health issues, mostly for young people, and the correlation between potency and harm.[2-5] This reduced risk perception is associated with increased use and a wider range of users, from teenagers to pregnant women and subjects with psychiatric conditions.[2-5]

The term "medicinal marijuana" can be understood as a marketing strategy to reduce the risk perception of drug use. In this perspective, marijuana has acquired the status in the collective unconscious of being good for health when used for medicinal purposes due to the false notion of its being non-hazardous. The medicinal use of cannabinoids is a debate that has gained importance in this space and poses a scientific issue that must be brought to the fore. The *Cannabis* plant has male and female forms, containing more than 400 chemical compounds, with the female plant carrying the highest concentrations of more than 100 cannabinoids. Delta-9-tetrahydrocannabinol (THC) is the main cannabinoid responsible for the psychoactive effect of cannabis, and its action is associated with impaired learning, memory, attention, and motor coordination.[2,4] Adverse effects of cannabis, such as psychosis, seems to be dependent on the THC dose imparted,[2] although this remains a point of academic debate.[4]

The issue of cannabidiol (CBD) is not new, and its use and efficacy have been controversial. On the one hand, its therapeutic potential has been used as a false argument for legalization of the use and cultivation of marijuana, with all its compounds. On the other, the abuse potential of THC has engendered prejudice in the scientific community against studying the pharmacological properties of the CBD molecule.[6]

"Medicinal cannabis" refers to products derived from cannabis recommended to treat a medical condition.[2] Regarding the therapeutic use of cannabinoids, the U.S. Food and Drug Administration has approved the following cannabis-derived drugs: dronabinol, nabilone, and CBD. Dronabinol and nabilone, related to THC, are indicated in chemotherapy-induced nausea and vomiting. Dronabinol is also indicated to stimulate appetite in states of exhaustion, such as AIDS. Finally, CBD is approved to treat two forms of pediatric epilepsy, the Dravet and Lennox-Gastaut syndromes,[2,4,7] and seizures associated with tuberous sclerosis complex.

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In Brazil, Resolution no. 327/2019 of the Brazilian Health Regulatory Agency (ANVISA) prohibits the use of the terms medication, remedy, phytotherapeutic, supplement, natural, or other similar terms on cannabis product labeling, packaging, and information leaflets.[7] ANVISA also advises that the following wording appear on cannabis product information leaflets: "Sold under medical prescription"; "Can only be sold with prescription retention"; "This product can cause physical or psychiatric dependence"; "This product should not be used in children under 2 years old"; "This product does not replace the use of registered drugs"; "This product does not present complete clinical studies proving its efficacy and safety"; "There are uncertainties regarding the long-term safety of using cannabis products as medical therapy"; "The use of cannabis is admitted for a defined clinical condition where other treatment options were depleted, and where scientific data suggest that cannabis may be effective"; "During use, the patient should not drive, operate machinery, or conduct high-risk activities, as their ability and attention may be impaired"; "Attention: risk to pregnant women and nursing mothers"; and "This product is for individual use, and should not be transferred to anyone else."[7]

There are currently no cannabinoids approved for psychiatric indications.[2] In this line, Black et al.[8] warn of the dearth of convincing data justifying their widespread use for depression, anxiety, psychoses, and other mental health disorders. The meta-analysis carried out by this group included studies using the whole plant and isolated compounds, and found that THC predominated as the active principle. Their conclusions emphasized the need for further studies.[8] Unfortunately, CBD is not always treated as an investigational pharmacological agent. Its use can be confused with marijuana legalization. It is important to mention that "medicinal cannabis" has been used to refer to all products derived from *Cannabis sativa* (THC, CBD, synthetic cannabinoids, and even the entire plant).[6]

The American Heart Association[4] issued a warning to help doctors and patients get better informed about the potentially harmful effects of cannabis use on brain health, especially in young and developing brains. It is noteworthy that social media may emphasize a beneficial role for marijuana, and the general population may perceive it as a harmless drug. However, the emerging evidence linking marijuana use to cardiovascular events and stroke, as well as the potential and demonstrated drug-drug interactions between marijuana and medications commonly used by the general population, call for caution and highlight the potential importance of active surveillance programs.[4]

Finally, scientific information should be disseminated to avoid misperceptions and achieve a clear differentiation among the use of cannabis in some diseases and in the wellness industry, as well as on the consequences of non-medical use of marijuana.[3] Public policies should focus on raising awareness about the potentially harmful effects associated with the use of marijuana by the general population.[4] Possible strategies include the use of standardized concentrations of active biological compounds and increase health warnings on available formulations.[4] Also, higher investments in scientific research to investigate harmful health effects of the non-medical use of marijuana are needed, as well as a better definition of the health conditions in which products derived from cannabis can be employed as an effective treatment.[3]

Disclosure

The authors report no conflicts of interest.

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