

Review

Adolescents and marijuana: Its prevalence, underpinning causes, effects and implications on the next generation

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It is customarily challenging and fruitless to prevent young adults and teens from drug experimentation. Yet, the onset of marijuana or cannabis use by school-age young adults and teens could be delayed with holistic interventions that aim at involving stakeholders (that is schools, families, agencies, media, etc.). The objective of this review was to sum-up continental comparative data on the prevalence of cannabis or marijuana use among young adults. Although continental studies on the prevalence, causes, effects, and preventions of marijuana use are limited, there is evidence to suggest that marijuana use is still on the rise among young people globally, especially in Africa, Europe, and America. False gratification such as, its harmless effects, its ability to aid performance, and its ability to protect one against superstitious forces are factors among others that lead adolescents to its experimentation.

Key words: Adolescents, marijuana, cannabis, prevalence.

INTRODUCTION

In the past 2 to 5-decade, adolescents' narcotic drug abuse and addiction have emerged as a thematic social canker affecting both developed and developing countries of the world due to its possibilities of triggering behavioral problems ranging from addiction to dependence that does not only affect health and model the users functioning but also leave the societies in which they live at risk.

Besides, the use of the narcotic substance by young people between 10 and 24 years of age has also been cited as affecting the developmental phase that occurs as the brain ripen and undergoes through emotional and cognitive maturity (Degenhardt et al., 2016). One of such

substance that is associated with the forenamed menace to adolescents and societies is marijuana.

For generations now, marijuana also known as cannabis, has been a prohibited substance in most parts of the world because of its noxious nature. However, the turnover is advancing faster as several states and nations have or are amending regulations to soften restricted laws against its use and production; thereby leaving adolescents at the receiving end.

On its production and cultivation, between 1998-2007, the Report on Global Illicit Market (2009) reported that marijuana is produced in over 170 countries around the world and its market uninterruptedly continued to receive

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new entrants ranging from developed and wealthy nations to under-developed and developing countries (Connolly and Donovan, 2009). Marijuana is also officially viewed by WHO (2015) as a commonly grown, trafficked, and exploited drug in the world. This means its availability to adolescents will continue to be effortless. Therefore, with the expectation that adolescents marijuana prevalence (that is lifetime and past year) may vary from time to time and region to region, it is important for a detailed update on its prevalence, the range of factors that drive its usage in terms of regional, cultural and continental influence as well as its effects and implication to social workers and societies. In effect, this will indirectly outline significant dynamic inputs for its interventions.

GLOBAL PREVALENCE OF MARIJUANA/CANNABIS USE AMONG ADOLESCENTS

A comprehensive global comparative data on adolescents' marijuana/cannabis prevalence has often been difficult to obtain because adolescents age groups are divided differently across the world while other nations do not or barely perform surveys to track the trends and prevalence. For this review, systematic evidences were examined across multiple national and individual studies such as The UNODC World Drug Report (2018; 2019), EMCDDA European drug report (2018), Drug Statistical Bulletin (2019), ESPAD Group Report (2016), Australian Criminal intelligence commission report on illicit drugs (2017-2018), CICAD report on drug use (2019), etc. to make conclusions on the trends and prevalence.

The predefined theme to search for relevant studies on the topic started generally with "cannabis/marijuana and adolescents, prevalence across the world" and ended with a more focus on continental findings. Since there was no unique adolescents classification across the world, the selection criteria for age ranged between 10-24 years while more priorities were given to studies and findings not older than 5-years with age classification below 20 years. In monitoring the trend, the aims were to pinpoint studies which reported the following indicators: any cannabis/marijuana use, how regular, and at what age.

Europe

Cannabis indeed constitutes Europe's most commonly consumed illicit drug. The drug's prominence is apparent from its role in the seizures. For example, according to the United Nations Office on Drugs and Crime (UNODC, 2019), Europe accounts for 15% of all cannabis herb and resin confiscated in 2017. Moreover, cannabis/marijuana use among European adults aged 15-34 was estimated

to be 14.6 million in 2015 (11.7%), with 8.8 million (15.2%) between the ages of 15-24 years (EMCDDA, 2015).

In 2018, the European School Survey Project on Alcohol and Other Drugs (ESPAD) among age 15-16-years students from 35 European countries, 18% reported the use of cannabis at least once in a year, while 8% reported cannabis use in the past month. Higher lifetime prevalence among students in these 35 countries was reported in Czech Republic (37% in 2015), Spain (31% in 2015), France (31% in 2016), Bulgaria (27% in 2016), Slovakia (26% in 2015), the Netherlands (22% in 2016) and UK (19% in 2016) (European Drug Report, 2018). At the least end of lifetime use, rates as low as below 10% were reported among 4 nations of the Nordic countries (Norway 7% in 2016, Finland 8% in 2015, Sweden 5% in 2016, Romania 8% in 2016, Cyprus 7% in 2016 and Greece 9% in 2015) (European Drug Report, 2018).

Contrary to the 2015-2018 European Drug and ESPAD studies, the prevalence of marijuana use among adolescents was reported to be 31% in France, 27% in Italy, 15% in Portugal, 13% in Malta, and 9% in Greece (Muscat et al., 2017), whereas data from the (EMCDDA) statistical bulletin 2019 reported a lifetime prevalence of cannabis among aged 15-24 years to range from 4.2 to 4.6% in 2016. On country basis, France 44.2%, the Czech Republic 39.2%, and the Netherlands 31.5% were countries with a higher lifetime cannabis prevalence among the fore mentioned age group in 2016, while low rates were reported in Romania 8.9% and Portugal 13.2%.

However, on past month usage, an estimated 7% adolescents aged 15-16 years were reported to have used cannabis in the past month with France 17% and Italy 15% among the highest in their 15–16 year olds; while lower figures were reported in Sweden and Finland (ESPAD, 2016). Among adolescents aged 15-24 years, past-month cannabis use was also estimated as: Italy 11.7% in 2017, Denmark 7.8% in 2017, Czech Republic 10% in 2016, Netherlands 9.2% in 2016, Bulgaria 8% in 2016 and UK 7.6% in 2016 (EMCDDA Statistical Bulletin 2019).

Regarding the trend in Europe, the lifetime cannabis/marijuana prevalence among adolescents is drastically increasing as most figures are above 20%, with France and the Czech Republic being identified as countries with a high lifetime prevalence in most relevant findings. This high prevalence in France may be attributed to the availability of cannabis/marijuana in the region, thereby making it easily accessible by adolescents.

Africa

As long as lifetime cannabis prevalence in 2017 is

estimated to be around 44.9 million (6.4%) in Africa among 15–64 years general population, with high prevalence in West and Central Africa (UNODC, 2019), it means that adolescents' likelihood of cannabis/marijuana experimentation in the region would be paramount.

Incidentally, the drug consistently remains the most abused drug by African adolescents compared to alcohol and cigarettes as last-month use in a sample population of 25, 372 school-going adolescents in 9 African countries (Ghana, Mauritania, Benin, Algeria, Namibia, Morocco, Swaziland, and Mauritius) by Peltzer and Pengpid (2018), who reported a prevalence of 4.1%, with highest in Ghana (8.1%) and the lowest in Benin (1.9%).

This viewpoint indicated a substantial shift thereby suggesting an increase compared to a local survey in Ghana, which found a lower prevalence of 2.6 - 7.2% (Doku, 2012) and a decrease in Morocco and Benin, which reported cannabis/marijuana prevalence in Morocco among high school students to be 8.1 (Zarrouq et al., 2016) and 13.9% in Benin (Kpotehouen et al., 2015). The increase in Ghana is not surprising as marijuana/cannabis popularly known in Ghana as “wee” is regarded as the commonly used narcotic drug by adolescents in the country which further reaffirms statistics from the Ghana Narcotic Control Board (NACOB) in 2017 which revealed that adolescents account for 35,000 of the country's 50,000 drug users (Ghana news, 2017).

In a post-conflict country like Libya, where adolescents aged 15-24 constitute about 17% of the general population (Index Mundi, 2016), young adults aged 20-24 (men) were estimated to be responsible for 14% of the country's overall health pressure as a result of illicit drug use (Degenhardt et al., 2016). Whereas, the prevalence of cannabis among young adults in Rwanda was found to be 4.4%, with an average initiation age of 11.4 years (Kanyoni et al., 2015).

Similarly, among South African youths, marijuana continues to be the most widely used illicit drug, particularly among people seeking professional treatment in medical centers as it accounts for 31% of all patients admitted compared to alcohol 20% (SACENDU, 2019). Emphatically, among adolescents aged 20 and below in Western Cape, South Africa who were treated successfully for illicit drug use, over 75% were treated for cannabis/marijuana use compared to 13% treated for alcohol (SACENDU, 2019).

In contrast to the study (SACENDU, 2019), a National Youth Risk Behaviour Survey reported that 12.8% of aged 13-15 years (grade 8-10) students in South Africa had used cannabis/marijuana, of which 9.2% had used it in the past month (Bhana, 2015). Although data on marijuana usage in Zambia and Zimbabwe appear sparse, in a similar school survey in Zambia and Zimbabwe, lifetime cannabis/marijuana prevalence across school-going adolescents was reported in different studies in Zambia to be 37.2% in 2013 (Siziya et al.,

2013), and 3% in 2016 (Mutale et al., 2016), while 9% lifetime prevalence with 13.4% in boys and 4.9% in girls were also reported in Zimbabwe (Rudatsikira et al., 2009).

In Nigeria, which accounts for about 60% of the population of West Africa, 10.8% of its general population (10.6 million) were estimated to have used cannabis in the past year, with an average initiation age of 19 years (UNODC, 2018). Even though cannabis/marijuana use and prevalence are reported across all age groups in the country, the overall past-year use is high among young adult of age 25 - 39 years with a prevalence of 19.3% in age 30-39 years; 14.3%, 25-29 years; 8.1%, 20-24 years; and 3.3%, 15-19 years (UNODC, 2018). The drug also tops the National Drug Law Enforcement Agency (NDLEA) list of narcotics seized in the country (NDLEA, 2016).

On gender bases, just as boys were expected to use more illicit drugs than girls, in Africa the prevalence of past-month cannabis/marijuana use was reported to be higher among boys (4.7%) than girls (3.2%), as male dominance were reported in 6 countries (Algeria, Mauritius, Morocco, Namibia, Swaziland, and Rodriguezs), while female preponderance was only recorded in Ghana (Peltzer and Pengpid, 2018). These preponderances in Africa suggest that, as far as an increasing number of countries in the continent start to look at cannabis/marijuana as the continent's poverty bailout, there will continue to be a growing expectation of the continent's cannabis boom. As a consequence, one possible effect of this boom is an increase in its use by teenagers as a result of increased availability, increased social acceptance, and potential affordability.

America

In America, cannabis/marijuana use is often reported to vary widely along a spectrum. For instance, according to the Inter-American Drug Abuse Control Commission (CICAD) and the Organization of American States (OAS), last-year cannabis/marijuana use in 2019 varies approximately from 0.5 to 16% in the general population. While the range is even-more broader among secondary school students from below 1% to nearly 32.8% (CICAD and OAS, 2019). In four countries of the region (Chile, Dominica, United States, and Antigua and Barbuda) with cannabis-related findings, its use by grade 8 students was estimated to be 20% or more compared to less than 5% in other countries (CICAD and OAS, 2019).

In addition, as marijuana vaping in North America has become more popular, cannabis/marijuana use is also estimated to be 14% in Canada and the United States and 2% in Mexico, whereas in South America it uses in Chile last year was reported as 14.5%, with Argentina and Uruguay prevalence below 10%. However, in the Caribbean sub-region, general cannabis use in Jamaica

was reported as 15.5%, Barbados 8%, and figures below 1% were also reported in the Dominican Republic, Panama, Paraguay and Ecuador (CICAD and OAS, 2019).

Based on a secondary school survey, Chile recorded a past-year cannabis/marijuana prevalence of over 30% in South America, Uruguay with over 15%, compared to the rates below 5% in Brazil, Paraguay, Bolivia, Guyana, Peru, Venezuela, and Suriname. Among students in the Caribbean, Antigua and Barbuda stood out with a rate close to 25%, then Grenadines, and Dominica and Saint Vincent, with rates approximately 20% (CICAD and OAS, 2019).

Similarly between 2014-2015 in Canada, 16.5% grade 7-12 students testified of cannabis use, of which 5.7% and 26.8% were in grades 7-9 and grade 10-12 respectively (Health Canada, 2016). Whereas in 2018, for every 8 adolescents in the US, 1 of aged 12-17 years (12.5%) were marijuana users compared to 34.8% among young adults of age 18-25 (SAMHSA, 2019). Therefore, cannabis use by school-going adolescents in the region is of particular concern given the growing evidence that cannabis is a drug of dependence, with adverse psychological and other sequelae associated with chronic or extended cannabis usage at a young age. Ultimately, it is reasonable enough to blame the increasing prevalence of cannabis/marijuana among adolescents in the region to the drug being legalized, making it more readily available with little or no legal penalties.

Asia

Although cannabis/marijuana use in Asia is estimated to be 2%, which is lower compared to other regions, amounting to nearly one-third (54 million) of the estimated global cannabis users live in the continent (Ministry of the Interior and Narcotics Control of Pakistan and UNODC, 2013). On country bases, a household survey in Thailand (2016) estimated 5.8% of aged 12-65 years as cannabis/marijuana users, with about half under 25 years (Manop et al., 2018). In India, among aged 10-17 years, lifetime cannabis/marijuana use was also reported to be 0.9% (Atul et al., 2019); while among age 12-19 years, the illicit drug use was estimated to be around 1.7% in Malaysia (Yusoff et al., 2014).

Contrary to the household findings, the lifetime prevalence of cannabis use in a national school survey was reported to be 1.5% among boys and 0.4% among girls aged 12-19 years in Malaysia (Howard and Ali, 2014). Meanwhile, in a systematic review, lifetime cannabis use among high school and college students aged 18 or younger in Iran was reported to be 5% (Nazarzadeh et al., 2015). Whereas in a sample size of 38,941, school-age adolescents aged 11-18 years from 5 Asian countries (Iraq, Kuwait, Malaysia, Mongolia, and

Vietnam), lifetime cannabis/marijuana prevalence was reported as 0.9%, with variation from 0.6% in Vietnam to 3.2% in Kuwait, and prevalence of last month use as 3.1% in Kuwait, 2.1% in Iraq, 1.1% in Mongolia, and 0.9% in Malaysia (Peltzer and Pengpid, 2017).

Among youths in Saudi Arabia, the substance has also been reported to be the extensively used illicit drug by aged 17-18-years students (Al-Musa and Al-Montashri, 2016) and among aged 15-25 general population of the Arab region (UNDP, 2016). Within the World Health Organization South-East Region, lifetime marijuana prevalence among aged 13-17 years was estimated as Bhutan (12% in 2016), Thailand (5.3% in 2015), Nepal (2.6% in 2015), Indonesia (1% in 2015), and Bangladesh (1.6% in 2014) (WHO, South-East mental health status of adolescents, 2017). Even though, cannabis/marijuana use among Asian youths may seem to be low compared to the Americas, yet, with the Asia-Pacific region accounting for up to 60% of the world's youths. This means that there are more adolescents cannabis or marijuana users in the region than it seems.

Australia/Oceania

The annual cannabis/marijuana prevalence in the Oceanian regions among 15-64-year-olds is estimated to be around 9.1% with available data from Australia and New Zealand, while little is well-known regarding the trends within the Pacific Island countries and territories (Katrin et al., 2018). Nevertheless, among the predominate countries in the region, lifetime cannabis/marijuana prevalence in New Zealand among aged 14-15 years is reported to have declined between 2012 - 2018 (18.7% in 2012, 13.6% in 2014, 14.1% in 2016 and 14.2% in 2018) (Ball et al., 2020). In contrast, during the same period, the New Zealand Health Survey reports that cannabis use has raised significantly among young adults as past year prevalence increased from 9 to 15%, and from 19 to 29% among 15 to 24 age groups. Thus, making the 15-24 years age groups the highest cannabis/marijuana users in the country (Ministry of Health New Zealand, 2019).

Cannabis is also reported to be the most widely used illicit drug among Australian high school students aged 16-17-years, with its use more prevalent in boys than girls (Guerin and White, 2018). Among the fore-named age groups in secondary schools, cannabis use was reported as 3% for 12-year-olds, 5% for 13-year-olds, 9% for 14-year-olds, 20% for 15-year-olds, 27% for 16-year-olds and 32% for 17-year-olds (Guerin and White, 2018). It may then be concluded that the use of cannabis/marijuana in the region rises as age increases, which indirectly imply that the potential legalization of recreational marijuana/cannabis use in New Zealand will set off a more substantial spread across the region as the country prepares to hold a referendum on marijuana's

legalization.

Comparative analysis

In providing a global insight into the phenomenon of cannabis/marijuana use during adolescence, it may be concluded that the lifetime prevalence of the drug is a matter of great concern as marijuana or cannabis use is considerably prevalent among adolescents. From the current review, Ghana, South Africa, and Nigeria are countries among others with high cannabis/marijuana use among adolescents in Africa.

However, in 2015, the drug was perhaps more prevalent among European youths as higher figures of above 30% (lifetime prevalence) were reported in the Czech Republic and Spain with France appearing to be where the drug was used most by students in 2016. Nevertheless, the United States has also continued to be the home of cannabis/marijuana use in North America followed by Canada, while the illicit drug use is high among Chilean and Uruguayan adolescents within the South America regions.

Regarding the Caribbean sub-region, Antigua, Barbuda, Jamaica and Dominica are countries with notable high cannabis prevalence among the adolescents' age groups, whereas substantial figures were also recorded among Asian adolescents of Kuwait and Thailand. Despite the lack of appropriate current findings in the Oceanian regions except for New Zealand and Australia, cannabis usage among adolescents in the region arguably may be considered moderate but rises as age increases.

FACTORS INFLUENCING ADOLESCENTS CANNABIS/MARIJUANA USE

As society advocates and propagandizes the legalization of marijuana/cannabis, adolescents will continue to receive conflicting messages about cannabis, whether it is safe or not. It has always been challenging to tease out a single factor as the cause of adolescents' cannabis/marijuana use. Despite that, distress adolescents are more likely to become regular marijuana/cannabis users compared to those with stable social support. Therefore, different factors play different roles on why adolescents abuse drugs, particularly cannabis or marijuana. These factors range from peer influence, availability of the drugs, to family structure.

The influence of peer pressure during adolescence has long been well-cited as one of the main reasons why adolescents' abuse drugs (Masibo et al., 2013), as adolescents peers have also been identified in most cases as the conduit for other new users to access and use illegal drugs (Alhyas et al., 2015). However, a study among adolescents in Malaysia also found that factors

such as smoking prevalence, alcoholic condition, truancy, absence of social support, and lack of family connectivity and supervising were positively linked to use of drugs (Yusoff et al., 2014). All these forenamed factors to some degree are factors that are influenced by friends, hence, this makes it necessary for parents to pay more attention to the kinds of friends their children hang out with; as friends are more influential during adolescence than parents.

In the political unrest regions of the world, the chaotic political situation and social unrest have been opined to provide a perfect atmosphere for the proliferation of vast amounts of drugs distributed at low rates (Micallef, 2017). Consequently, this availability and affordability of drugs is also a crucial factor that has been reported to influence teenage substance use (McKiernan and Fleming, 2017), as the relationship between lifetime marijuana prevalence and perception of easy accessibility was reported to have a strong correlation (CICAD and OAS, 2019). This thereby adds up to the argument that more cannabis use among adolescents will prevail when various changes are proposed to legalize cannabis because of its medicinal and economic benefits.

Besides the availability and affordability of marijuana, false gratification by adolescents have also been opined to be a factor that influences an adolescent to use marijuana or cannabis. For example, among youths in Africa, cannabis/marijuana is mostly used in the ghetto. In the ghetto, marijuana is mostly referred to as "wee" meaning "all of us". It is perceived as 1) providing a certain degree of emotional connection to users, 2) a stimulant that aids in rational thinking, 3) a mystical herb that protects users from evil, and 4) an antidote that mitigates witches' spiritual operations (Botchway and Prempeh, 2017). Some adolescents' cannabis or marijuana users also use it as a means of coping with boredom (Benschop et al., 2015), or to hinder tensions and frustrations, or in a way of increasing or decreasing the effects of other drugs (Patrick et al., 2016).

Similar to these false gratification, factors such as misleading and other conflicting media messages are reported as factors that influence an adolescent to cannabis in Canada. Youths in Canada do not only perceive cannabis as a drug that is not as harmful as alcohol that prevents or cures cancer and enhances driving ability, but as a substance that is considered as naturally and commonly used, not only by friends but also by adults, thereby interpreting the drug as in-noxious and safe to use (Porath-Waller et al., 2013), just as how other youths in Africa consider marijuana as a substance that does not predispose users to violence unless when used with other drugs or chemical (Botchway and Prempeh, 2017). Regarding this misinterpreted conclusion, Stewart and Moreno (2013) blamed limited studies examining the long-term health consequences of marijuana use as the reason why marijuana is still perceived as harmless and appealing to people than tobacco or other illicit drugs.

Contrary to misinterpreted benefits of marijuana, child maltreatment and social anxiety have both been linked with higher cannabis use among adolescents (Vilhena-Churchill and Goldstein, 2014), as marijuana or cannabis is used by some adolescents as a means of self-treatment for mental health conditions such as depression, trouble concentrating, sleeping difficulties, anxiety and mood disorders (Pedersen et al., 2015).

Effects of adolescents marijuana/cannabis use

During adolescence, the brain is understood to undergo a significant amount of changes including the re-wiring of the neural connections through the elimination of extra synapses that are no more needed. Cannabis use during this period is reported to be a disruptor that disrupts this normal pruning and elimination process through modulation of neurotransmitters and inhibition of microglial processes (Filbey et al., 2015) which also decreases the white matter volume as a result of abnormal connectivity within the brain (Gruber et al., 2014). These changes are reported by (Gruber et al., 2014) to result in the impairment of some cognitive functioning such as increased impulsivity, poor reaction, and increased error in executive functioning.

Similarly, marijuana use during adolescence has also been reported by a large longitudinal school-based study to have associated risk of leading to poor functioning across all domains in school compared to alcohol (D'Amico et al., 2016). Thus, making adolescents who depend on cannabis to have poor academic performance, increased delinquency, mental health challenges, and more academic unpreparedness.

In addition, the most dreadful effect of cannabis/marijuana during adolescence is associated with the risk of developing addiction and psychotic events during late adolescence or adulthood. Evidence indicates that long-term marijuana use leads to addiction and dependence on illicit drugs as 9% of all those who experiment or use marijuana are reported to have become addicted to the substance (Lopez-Quintero et al., 2011). Whereas using marijuana was also associated with underage psychotic experiences including schizophrenia (Mulè et al., 2017).

Besides the effects of marijuana/cannabis to users, authors of previous US studies (Contreras, 2017; Northwest High-Intensity Drug Trafficking Area (NHIDTA), 2016; Berenson, 2019) reported that legalization of medicinal and recreational use of marijuana is associated with organized community cannabis/marijuana offenses such as bullying, assault, theft, and robbery among young adults. This thereby implies that when marijuana or cannabis is legalized or when the substance becomes easily accessible to adolescents, there are high tendencies that crime among adolescents will increase, leading to more likelihood of

adolescents finding themselves in juvenile prisons as crimes are paramount to raise.

Prevention and intervention strategies

According to the World Healthy Data, cannabis is the main reason people seek substance abuse treatment in the world. It is further reported that it accounts for approximately 40, 42, 26, and 16% of all psychoactive substance treatment entries in Africa, South-East Asia, Europe, and the Western Pacific Regions respectively (WHO, 2010). Similarly, cannabis is also reported to be the most frequent psychoactive substance that accounts for treatment entry in most low-income countries of the world (WHO, 2010).

On the prevention of cannabis or marijuana use during adolescence, there are lots of emergence questions on what kind of treatment is effective or necessary in reducing the prevalence of cannabis use during adolescence. The undoubtable and surest way has always been by preventing its availability. However, the changing legal landscape as a result of movements aiming at the legalization of marijuana or cannabis for medicinal and recreational use means its availability will continue regardless. Thus, making attempts at preventing adolescents access to marijuana or cannabis fruitless.

Notwithstanding these challenges, there is evidence to suggest that behavioral preventive interventions that cover the environment, and target indicators have an impact on substance use (WHO, 2016). Therefore according to WHO (2016), interventions that aim at targeting families were reported as likely beneficial strategies (EMCDDA, 2013) because it is more effective compared to youths-only prevention programmes (Foxcroft and Tsertsvadze, 2011), while school-based programmes that integrate social competence and social influence has also been reported to have the potentials of reducing cannabis use and beyond when compared to interventions that aim at controlling (Faggiano et al., 2010).

CONCLUSION

There is persistent evidence to suggest that the increasing legalization of marijuana or cannabis has contributed to the forced belief that marijuana is harmless during adolescence. Despite multiple research findings that have suggested the detrimental consequences of marijuana or cannabis, many still consider its medicinal, recreational, and economical benefits. Thus, discussions on the harmful effects of marijuana as a topic of heated debate are essential for understanding the present scenario.

However, these eye-opening statistics do not only support the need of developing effective holistic

interventions that involve stakeholders but emphasize the need for further monitoring of trends, predictors, and the conflicting media messages that promote and advocate for marijuana legalization across the globe.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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