

Marijuana

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Abstract

An understanding of marijuana, its uses, and its effects on human bodies can provide insights on why people widely use it despite increased risks of health complications. Marijuana is a mixture of dried parts of the Cannabis sativa plant and is widely used around the world as an illicit substance. It contains delta-9-tetrahydrocannabinol as the major active ingredient responsible for its stimulating effects on users. It has numerous street labels including Mary Jane, pot, weed, reefer, herb, ganja, smoke, bhang, and grass. Marijuana is widely used for recreational purpose and as a medicine to treat various health conditions.

Marijuana

Marijuana is a mixture of dried parts of the Cannabis sativa plant and is widely used around the world as an illicit substance. Its main mode of intake involves smoking, although it can also be mixed with food and drinks. Despite continued ban, marijuana's use around the globe has been on increase over the years. World Health Organization (2012) estimates that about 3 percent of the global population use marijuana, with majority of this population being youths in developed countries, such as the United States, Australia, the United Kingdom, and other European nations. For example, "12.5% of 8th graders, 28.8% of 10th graders, and 36.4% of 12th graders" in USA used marijuana in 2010 (National Institute of Drug Abuse, 2011, para.1). Lately, the substance is being controversially used as a medicine to treat numerous health complications, such as ocular pressure and nausea. However, its use is associated with different side effects including blurred perception, high blood pressure, and increased risk of heart attack. Therefore, an understanding of marijuana, its uses, and its effects on human bodies can provide insights on why people widely use it despite increased risks of health complications.

Description

According to Earleywine (2002) marijuana is a mixture of dried parts of Cannabis sativa plant, which is grown in various regions around the world. These parts including stems, leaves, flowers, and seeds are dried while green, shredded, and mixed. The drug contains delta-9-tetrahydrocannabinol (THC) as the major active ingredient responsible for its stimulating effects on users. In addition, it contains other cannabinoids, which do not affect users significantly. In oily form, marijuana is referred to as hashish oil or hashish. Hashish comes as resinous fluid extracted from the tops of flowering part of the hemp plant. Hashish oil comes as a viscous alcohol that appears as a dark green fluid. It is obtained through distillation: boiling the crude form of marijuana or hashish in a solvent, which is then filtered and evaporated to leave the oil. These two forms contain higher levels of THC than the crushed form of marijuana. The drug has numerous street labels including Mary Jane, pot, weed, reefer, herb, ganja, smoke, bhang, and grass. Users rely on different techniques to consume the three forms of marijuana.

Smoking remains the most common style of intake of marijuana around the world because of its simplicity. The most popular smoking methods include: blunt, cigarettes that have been ridden of tobacco and topped up with the drug; joint, marijuana rolled in form of cigarettes; bong, the drug rolled into pipes; and one-hitter, a specialized pipe that enables users to control inhaled smoke (Iversen, 2001). Users also take marijuana by eating raw leaves, stems, or flowers of the *Cannabis sativa*. Marijuana is also mixed with foods and drinks to lessen adverse health effects associated with smoking of marijuana. For example, it is mixed with alcohol to produce green dragon, which is taken through swallowing. In some regions, smokers use hashish oil to bake biscuits or cakes to lessen euphoria effects of marijuana, as the active ingredient (THC) is chemically broken down into less potent cannabinoids (Iversen, 2001).

History of marijuana in medical field

The use of marijuana in medicine can be traced as early as 2737 BC, during the reign of Chinese emperor, Shen Neng. The emperor use to prescribe marijuana tea as a method of treating gout malaria and rheumatism. It was from these uses that popularity of the drug spread to other Asian countries like India and the Middle East and Egypt (Zeese 1999). In India, there a Hindu sect that used the drug for religion and to recover from stress. In those early days, medical doctors used the drug during childbirth to and other cases to relief from pain. However, the ancient doctors discouraged the overuse and misuse of the drug. They believed overuse of the drug had effects such as impotence and hallucinations that they described as seeing devils. In the 18th century, there were some journals in America that recommended the seeds and roots of the cannabis plant to treat skin diseases and venereal disease. An Irish doctor William O'Shaughnessy is credited as the first doctor to popularize the drug in medicine in England and United States. He was a physician working for British East India Company when he discovered that the drug reduced the pain of rheumatism (Zeese 1999). He also found out that the drug also assisted in reducing discomforts caused by nausea in rabies patients and cholera as well as tetanus. Between 1745 and 1775 records from George Washington's diary shows that he grew the drug for medical purposes at Mount Vernon. Between 1900, and 1949 marijuana was used in south Asia to treat asthma and bronchitis.

In 1914, the use of the drug was declared a crime through the completion of the Harrison act. The act use taxation to discourage the use of opium and coca drugs. However, it imposed a tax for use of marijuana for other reason but medical use. The tax was very high, interestingly, more than the cost of the drug itself. Anyone who was found using the drug without payment of the tax was punished (Braitstein et al 2001). By the end of 1937, 23 states in America banned the use of the drug. Most of the banned it to ensure that morphine addicts did not substitute the morphine to marijuana. Some states banned the drug as Mexican immigrants into the US brought large quantity of the drug with them. In the same year, the use of the drug was banned for nonmedical uses by the federal government through Marijuana Tax act. In 1961, UN convention declared to discontinue the use

of the drug for nonmedical purposes within twenty-five years. In 2003, a Canadian HIV patient was given government grown marijuana. The court allowed the use marijuana to authorized patient through their patients to relief pain and nausea and other chronic diseases. In 2006, United States Presbyterian church supported the medical use of the drug to authorized patients (Braitstein et al 2001). By 2010, several state of America had legalized the medical use of including DC.

Uses

Recreational

Marijuana is widely used for recreational purpose, as people use it illegally to seek the relaxing and intoxicating effects of the substance. As Shohov (2003) argues, it is believed that THC in marijuana triggers a chain of cellular responses that make users feel relaxed and euphoric. For instance, after smoking marijuana, the chemical compound is rapidly absorbed into the bloodstream and distributed from the lungs to other parts of the body including nerve cells in the brain. In the nerve cells, THC binds to cannabinoid receptors, affecting activities and functions of the cells. Majority of these receptors are concentrated in the brain regions responsible for controlling thinking, excitement, movement of body parts, and other major sensory activities. Therefore, binding of THC to these receptors stimulate relaxation, euphoria, altered thinking, uncontrolled speech, increased appetite, and anxiety, among others. Duration of these induced effects vary according to dosage of marijuana taken.

Medical

Today, marijuana is used in the medical field to treat a wide range of health problems. Other than THC, marijuana contains more than forty other cannabinoids that have been found to have medicinal value. For example, cannabinol (CBN) and cannabidiol (CBD) in marijuana result in sedative, anti-nauseant, and other related medical activity (Shohov, 2003). Consequently, medical practitioners rely on marijuana to manage physical symptoms in patients with different health problems.

Medical marijuana is used to control queasiness and nausea common in patients who have undergone malignancy chemotherapy (Kumar, Chambers, & Pertwee, 2001). It is also used to manage other symptoms associated with debilitating health conditions. Patients with these diseases experience various psychotic conditions that are likely to hinder their recovery if not managed properly. In most cases, they experience depression, hallucinations, insomnia, and other related conditions. They also experience pain depending on their conditions. Marijuana is used to assist the patients in overcoming these conditions by stimulating excitement and anxiety. It is also used to stimulate appetite and relaxation in patients living with acquired immune deficiency syndrome (AIDS). This increases rate of food intake among the patients, enabling them to manage weight loss associated with the disease.

Medical marijuana is commonly used in treatment of seizures common in patients with certain health problems.

According to Iversen (2001), marijuana inhibits secretion of glutamate when THC binds to cannabidiol receptors (CB1) in the brain. This results in anticonvulsant and anti-epileptic activity in the brain, making marijuana an effective drug to prevent seizures. Therefore, it is used to manage convulsions in patients with epilepsy and multiple sclerosis. Other pharmacological use of marijuana includes treatment of spinal injury, substitute for other THC-based medicines, inflammatory health complications, and mental illnesses. However, its use in the medical field remains highly controversial.

The controversy mainly revolves around the psychoactivity of the substance. Critics believe that marijuana can worsen health conditions of patients with psychotic conditions, as it stimulates excitement, loss of inhibition, and anxiety (NIDA, 2011). They also believe marijuana can lead to addiction and dependence, making it impossible for the patients to withdrawal from the drug after treatment.

Countries that use marijuana as a drug

Marijuana is widely used in the world. However, its use is strictly regulated to ensure it is not misused. In Uruguay, the use of marijuana is limited to ten grams per week. In America, several states have legalized medical use of marijuana. Colorado and Washington state have even legalized its use to include recreational purposes. In Albania, medical use of marijuana is accepted. Medical use of marijuana in Netherlands is accepted. In United Kingdom, the medical use of marijuana is also allowed as well as Australia. Czech Republic also has allowed medical use of marijuana. Other countries that have allowed medical use of marijuana include Portugal, Spain, Italy, Estonia, and Switzerland.

SIDE EFFECTS OF MARIJUANA

Marijuana has various adverse effects that arise due to its mode of intake and constituent chemicals. According to WHO (2012), smoking of marijuana is detrimental to respiratory system because it results in short-term bronchodilation of air vessels and obstruction of airways. This reduces the amount of oxygen in the bloodstream, increasing likelihood of dizziness shortly after smoking. Repeated exposure may cause obstructions of blood vessels, preventing flow of blood in the body. Prolonged use of the substance is also associated with different types of cancer including lung, laryngeal, oral, and esophageal cancers (Hashibe et al., 2006). For older users, smoking of weed results in increased risks of cardiovascular complications. It increases the load on cardiac muscles, which respond by exerting more pressure on the blood to match body requirements. The smoking also increases carbon monoxide levels on the bloodstream. These outcomes are more likely to cause high blood pressure and coronary artery complications.

Hall and Solowij (1998) observe binding of THC to cannabidiol receptors impairs normal functioning of the brain, as these receptors control majority of the brain's activities. Marijuana impairs psychomotor abilities, which negatively affect learning and social skills of users. It affects the ability of chronic users to concentrate on activities and to remember information. This makes it difficult for users to perform complex tasks that require increased coordination and processing of information.

Overdose of marijuana increases risk of developing long-term psychotic conditions among users (Kumar et al., 2001). Under normal dose, recreational marijuana arouses transient psychosis, in which users feel anxious, relaxed, excited, and talkative. However, taking high levels of marijuana may exacerbate these conditions. Users may exhibit weird behaviors, hallucinations, illusions, blurred vision, impaired hearing, and other related behaviors. These bizarre behaviors mainly manifest shortly after taking marijuana and can persist for several hours or days depending on the level of overdose. If the situation is not managed promptly and effectively, the effects may degenerate to mental disorders, such as schizophrenia, mania, and depression.

Cannabinoids in marijuana are associated with reduced ability of the immune system to prevent the body from infections (Kumar et al., 2001). They lead to malfunctioning of cells that control functions of the immune system by inhibiting release of cytokine, production of antibodies, functioning of natural killer cells, and distribution of leukocyte. This limits the ability of the system to safeguard the body against infections by microorganisms. Early exposure to marijuana also disrupts reproductive development. It affects secretion of sperms and hinders normal adolescence in men. It affects production of female eggs and menstrual process in girls and increases risk of premature births in women who take it during pregnancy.

Repeated exposure to marijuana results in addiction and dependence, which predispose chronic users to other health problems (NIDA, 2010). Frequent users develop a tendency to rely on the substance to perform tasks or influence the required behavior. This tendency eventually turns into habit, as users find it impossible to execute their duties without smoking or taking the drug. For example, a user who frequently relies on marijuana to improve talkativeness in a social setting is likely to become dependent on the drug. In addition, frequent abuse of marijuana predisposes users to other substances, such as alcohol, cocaine, and cigarette.

REASONS FOR USE OF MARIJUANA

Based on uses of marijuana, people use it for a wide range of reasons. As WHO (2012) reports, recreational users smoke, eat, or drink the substance to achieve the associated euphoric or psychoactive state. They want to experience euphoria (popularly referred to as 'high'), which makes them disconnect from reality temporarily. In turn, this makes them relax or forget some of the social problems they are experiencing. For others, smoking recreational marijuana is a habit that they perform to satisfy their urge to smoke or to perform their respective duties and tasks. They are dependent on marijuana to the extent that they cannot execute their duties without the herb. Therefore, the substance serves as their source of motivation.

According to NIDA (2010), majority of youths use the substance because of peer pressure and the desire to be like their role models depicted taking marijuana in mass media. In adolescent stage, individuals are greatly influenced by activities of friends. They tend to imitate deeds and behaviors of their friends as a way to gain acceptance and recognition. Therefore, adolescents who befriend users of marijuana engage in the behavior to develop a sense of belonging in a social group. Children also wish to look like particular individuals who they admire in the society. Consequently, they tend to copy behavior of these role models to improve chances of being like them in future. Therefore, youths associating themselves with role models who appear in television, newspapers, and other social media channels smoking weed are more likely to engage in the behavior.

In comparison, users of medical marijuana seek to achieve varied objectives (Earleywine, 2002). Their decisions to take the drug are informed by advice of medical professionals. Some rely on the drug to reduce pain caused by their health conditions, such as muscle spasms and spinal injuries. Others want to forget about social problems encountered because of their incapacitating health conditions. For example, AIDS patients may take the herb to forget about stigmatization and isolation by other members of the society. Physicians may also prescribe marijuana to patients to treat health complications, such as multiple sclerosis and inflammatory complications. Patients may also use marijuana as a substitute for other ineffective pain management drugs.

TO WHOM THE MARIJUANA IS PRESCRIBED?

Marijuana is prescribed to patients with severe pain from chronic diseases and other illness. Marijuana has been prescribed to HIV/AIDS patients, nausea and vomiting patients as well as multiple sclerosis. To relief spasticity. In HIV/AIDS, patients it is used to reduce anorexia associated common with its patients (Voelker 1997). It has also been used to cancer patients. Research has shown marijuana has anticancer effect.

CASES WHEN A DOCTOR CAN PRESCRIBE MARIJUANA

A doctor can prescribe marijuana to a patient if the patient is experiencing severe pain. This can result from chronic disease or any other acute disease (Ogborne 2000). For example in 2003 a Canadian court authorized prescription of government marijuana

to HIV patients to relief them from pain. The doctor can also prescribe marijuana to a patient experiencing nausea to reduce its discomfort to the patient. However, There are various conditions that may prevent a doctor from prescribing marijuana to a patient. To begin with, if it is illegal in the country or the state that the doctor operates to use the drug, the doctor cannot prescribe the drug to his patient (Pacula et al). In addition, a doctor cannot prescribe marijuana to an allergic patient since it will have more negative effect to the patient than positive.

MEDICINE THAT CAN GIVE THE SAME EFFECT AS MARIJUANA.

There are drugs that have effects similar to those of marijuana. One of the drugs is morphine. This drug is a recreational drug and as an analgesic drug. In the market, it is sold under several trade names. It is the main chemical substance in opium plant. For medical purposes, the drug is used to relief a patient from suffering and severe pain in both acute and chronic diseases. It is mostly directed to the nervous system. Just like marijuana, morphine has high addiction potential to its users. The other drug that has the same effects as marijuana is cocaine. This drug comes from coca plant. In medicine, it is used in low doses as an anesthesia. It is a powerful stimulant for the nervous system. It heightens the moods of the user and motor activity just like marijuana.

CONCLUSION

Marijuana is a mixture of dried parts of Cannabis sativa plant, which include dried and shredded stems, leaves, flowers, and seeds. The drug contains THC as the major active ingredient responsible for its stimulating effects on users. In oily form, marijuana is referred to as hashish oil or hashish. The latter is a resinous fluid extracted from the flowering part of the hemp plant, while former comes as a viscous alcohol obtained by distilling hashish or the shredded marijuana. Smoking remains the most common style of intake of the substance around the world because of its simplicity. Users may also take it by eating raw leaves, stems, or flowers of the Cannabis sativa. It may also be mixed with foods and drinks to lessen adverse health effects associated with smoking.

People smoke or eat the substance for recreational purpose, that is, seeking the relaxing and intoxicating effects of the substance. After smoking, THC in the drug binds to cannabinoid receptors in the nerve cells, stimulating relaxation, euphoria, altered thinking, uncontrolled speech, increased appetite, and anxiety, among others. In addition, the substance has a wide range of controversial uses in the medical industry. It is used to control vomiting and nausea common in patients who have undergone cancer chemotherapy. It is also used to manage other symptoms associated with debilitating health conditions, such

as pain and seizures. However, the drug has various side effects on users. Common among these effects include weird behaviors, hallucinations, illusions, blurred vision, impaired hearing, addiction, dependence, reduced body immunity, and respiratory problems. This indicates that recreational users smoke, eat, or drink the substance to achieve the associated euphoric or psychoactive state. In contrast, medical users rely on the drug for management of chronic symptoms associated with incapacitating infections.

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