## Example of research paper on the benefits of legalization of marijuana

Literature, Russian Literature



In summer 2014, New York became the 23d state to legalize medical usage of marijuana. The State Assembly issued the Compassionate Care Act on June, the 20th. This research paper addresses pros and cons of legalization of marijuana for medical purposes in New York City not touching the controversial issue of legalization of marijuana for recreational purposes. Marijuana has been used for medical purposes for ages. Medical marijuana refers to the extraction from the plants named Cannabis sativa and Cannabis indica (Whitehall, 2014.). Those plants contain over sixty various chemicals, including delta-9-tetrahydrocannabinol (THC, the primary psychoactive ingredient) and cannabidiol (CBD.)

Medical marijuana can be consumed in several different forms. It can be smoked, ingested in a form of a pills, oral sprays or added to foods. In New York state, medical marijuana usage is legal in any form except smoking. Marijuana is well-known for its health benefits. It's a well-known drug to treat serious conditions including nausea and pain caused by cancer, HIV/AIDS, Crohn's disease, rheumatoid arthritis, cachexia, etc. According to the Institute of Medicine data, the chronic pain affects 116 million of American people and costs the USA over \$600 billion a year in health care costs and productivity lost (Webb, 2014.)

The tests have proven that the usage of medical marijuana via smoke-free vaporizers in patients with chronic pain provides the pain control effect comparable with IV patient-controlled analgesia, many patients reported sufficient pain reliefe from the cannabinoids without significant side effects (Webb, 2014.) Also, the cannabinoids, according to various studies, prove their efficacy in addressing general neuropathic pain, as well as neuropathic

pain associated with multiple sclerosis and also with HIV (Abrams, 2007.) Use of medical marijuana is justified in cases of for anorexia, vomiting, muscle spasms and seizures, high blood pressure and glaucoma; it's effective as anti-epileptic, anti-inflammatory, sedative and anti-depressant.

Let's take a closer look of how the medical marijuana works exactly. The human body already produces the chemicals that are similar to those that marijuana contains. The body has the cannabinoid receptors (CB1 and CB2) found mostly in the nervous and immune systems. In the bloodstream, "exogenous cannabinoids act like endocannabinoids" (Compassionate Siences), so, marijuana facilitates the naturally-produced chemicals work in a more effective way.

The most active components are the following: THC, CBD, CBN, CBC and CBG. THC (delta-9-tetrahydrocannibinol mentioned above) acts as a muscle relaxant, central nervous system stimulant and also as anti-inflammatory. The cannabidiol (CBD) produces analgesic, anti-convulsive, sedative and anti-convulsive effects, also fighting anxiety in patients. The cannabinol (CBN) addresses the pain, helps to lower the high eye blood pressure, while the cannabichromene (CBC) enhances the THC effects and acts as pain-killer, sedative and anti-inflammatory agent. Acording to the United Patients Group data, the cannabigerol (CBG) is rarely found in high amounts in marijuana; it has strong anti-microbial, anti-inflammatory effects in patients, provides sedation and sleep assistance.

According to Compassionate Sciences alternative medical centre, the cannabinoids are delivered to the blood "through the lungs (when inhaled), the digestive system (when consumed) or the skin (when applied topically)".

Once going into the bloodstream, they reach the brain and central nervous system. The bioavailability of active components, for example, TCN, is only about 1% when it reaches the brain (in case of inhalation.) Pharmacological activity peak is observed at about 20 minutes after the intakethrough inhalation and lasts about 3 hours. In ase of oral intake, the effects are delayed a little, but last longer (for 4-12 hours.)

In 2006, the Scripps Research Institute (California) discovered that THC can prevent "an enzyme called acetylcholinesterase from accelerating the formation of Alzheimer's formations in the human brain" (Smith, 2012.) Also, marijuana helps to fight depression and anxiety, according to studies published by USC, SUNY Albany and Harvard Mental Health Letter. A 2006 study conducted by researchers of University of California found that cannabioids help to improve the performance of therapy for hepatitis C (Smith, 2012.)

Actually, marijuana does not provide the treatment to any illness, it does not eliminate the casue of pain or nausea, but its active components improve the patient's condition, help to control the ilness, that's vital for patients with chronic or terminal diseases, when use of other shemes of analgesia is unreasonably dangerous.

The use of marijuana for medical purposes proved to be highly effective. According to the survey published in the New England Journal of Medicine (Castillo, 2013), 76% of interviewed doctors from 72 different countries proved the effectiveness of marijuana use for medicinal purposes. The study conducted by Ryan-Ibarra, Induni and Ewing in California in 2012, have shown the inspiring results: 92% of the surveyed patients stated that

medical marijuana " alleviated symptoms of their serious medical conditions" (Ingraham, 2014), including chronic pain, migraine, cancer, and arthritis.

There a lot of success stories of patients survived or alleviated their illnesses through medical marijuana usage. For example, Shona Banda suffering from a terminal stage of Crohn's Disease, decided to refer to alternative medicine to save her life. After using natural remedies including cannabis oil she returned to normal healthy life and wrote a book "Live Free or Die." Another miraculous story happened to little Charlotte Figi, who suffered from seizures as a sympthom of epilepsy. After usage of high-CBD medical marijuana her seizures had stopped immediately. Charlotta's story was featured in a CNN documentary (Gummow, 2013.)

Those and many other success stories motivate people supporting medical marijuana legalization. For example, Missy Miller, residing in Atlantic Beach, contributed to raising public voice in protection of medican cannabis legalization. Her son, Oliver, survived a stroke in utero and has been suffering from multiple seizures. Because some strains of marijuana have received medical recognition for controlling seizures in kids, Missy Miller had decided to devote her life " to fighting for the legalization of medical marijuana in New York" (Gildin, 2014.)

The usage of medical marijuana is often questioned becose some experts express concerns about lack of medical evidence on the marijuana treatments' effectiveness. Some people mention common side effects of marijuana like euphoria, dizziness, short-term memory loss, possibility of anxiety and psychosis, suppression of the immune system.

There're some studies ongoing addressing the issue whether the smoking of marijuana can increase a cancer risk significantly. The epidemiologic studies have found no "increase in oropharyngeal or pulmonary malignancies attributable to marijuana" (Webb, 2014.)

In fact, all the prescription medicines and most of the natural remedies have certain side effects; for example, prescription drugs usage kill about 100 thousand people all over the world annually (Smith, 2012.) Many physicians say that if the medicine has no side effects it probably doesn't work.

Many women are concerned in medical marijuana usage due to its possible negative influence of fetus development. But the scientific studies say that prenatal exposure to medical marijuana is not a major factor predicting the pregnancy outcome, and that "marijuana has no reliable impact on birth size, length of gestation or the occurrence of physical abnormalities" (Smith, 2012.)

Some researches show that marijuana is addictive. But only about 9 percent of all marijuana users become addicted to this drug (National Institute on Drug Abuse, 2014), so, prescription-based usage under control of physiciants may not cause addiction or have sufficient deterioration effect on patients' health. Some authors associate psychosis from depression to schizophrenia with cannabis intake. But at the same time, those authors can not distinguish psychotic illness preceding marijuana usage (Whitehall, 2014.)

Pharmaceutical companies often oppose medical marijuana usage, because wide usage of this relatively inexpensive and natural remedy can hurt their revenues.

So, as the lot of studies prove effectiveness and safety of prescribed medical

marijuana usage, I strongly believe that the medical marijuana should be legalized not only in New York but in all the states due to the overwhelming proofs of its potential of providing relief and better quality of life for the patients with various illnesses and conditions.

The benefits of medical usage of marijuana exceeds the drawbacks, potential risks and side effects significantly. Of course, medical authorities and research organizations should continue studies addressing marijuana effectiveness; the use of cannabinoids should be supervised by medical staff and be limited in children and adolescents to prevent substance addiction and negative helth outcomes.

The legalizations of marijuana assumes not only creation of a proper legislative foundation, but elaboration of insurance procedures, testing protocols, risk management issues, proper training for health care professionals, etc. The implementation of responsible medical application of marijuana and its chemical components creates a challenge for healthcare, but also brings many benefits to the patients.

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