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A preliminary narrative of pharmaceutical drugs and medical marijuana use in migraine treatment

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Abstract

The health benefits of medical marijuana have been widely debated at individual, society and global policy playgrounds. However, these arguments are mainly based on anecdotal evidence with little scientific underpinnings. Drawing on a single-case self-reported monitored wellbeing, this paper provides a preliminary feedback on a comparative narrative between pharmaceutical drugs and medical marijuana use in the treatment of migraine. Husserl's phenomenological framework is used to address any form of imbalances in both perception and real-time experiences in use, while controlling for any bias that may have resulted from lop sided public information, perception and societal stigma. While some schools of thought project marijuana as a gateway drug to the infernal realm, this study provides a counter verdict based on real time practical experience from a well informed and educated user. Notwithstanding the immense benefits, an inappropriate, heavy and prolonged use of a high-THC strain marijuana among individuals undergoing brain development and/or with complicated underlying health conditions and family history of schizophrenia may have adverse effect on users. Therefore, the study's inability to disentangle issues of causality and correlation has fragmented and complicated the findings. In effect, a legitimate concern is raised about having a well-informed, research-driven knowledge and awareness before using medical marijuana for any health purpose.

Key words: Marijuana; Migraine; Phenomonology

Introduction

Both anecdotal and empirical evidence confirmed the numerous health benefits of medical marijuana (Hoffenberg et al., 2017; Svrakic et al., 2012). However, the unending controversy over the growing use of medical marijuana has garnered attention within the research fields of public health, psychiatry and social welfare with little on the economic implications. Despite its illegal status in many countries, marijuana has remained one of the most popular social drugs with varying patterns of use for medicinal, industrial and recreational purposes. Knowledge about the plant, its benefits and side effects have been clouded by prejudice and subjective views even among researchers who are either for and or against the use and legalization of marijuana. It is therefore difficult to establish a firm ground on what the actual therapeutic benefits of marijuana is in any clinical experiment, irrespective of strides made in scientific research. In the case of developing countries, there is little knowledge about marijuana, especially among practitioners in the field of medicine. Also, those with enough knowledge on the plant are most often unlikely to educate the general public with a well-established caveat. Some plausible reasons for this are the negative social stigma attached to marijuana owing to years of misinformation that characterised the prohibition movement.

Often when marijuana is mentioned on any platform it is associated with social ills. This further entrenches the negative views on it without considering any empirical evidence. Despite the abundance of literature on marijuana use, existing clinical studies to (dis)prove the health hazards of marijuana remain limited and fragmented. Considered conjointly, the evidence is inconclusive. On occasions where the literature pointed out the health hazards of the substance, an overdose was recorded (Bachhuber, Saloner, Cunningham, Barry, 2014; Josephson and Goode, 1971; UNODC, 2017).

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Therefore, establishing a firm stand on the real and potential effects of marijuana among countries that legalized it, those about to, and anti- marijuana countries has reopened the research window for further inquiry on people's perception prior to using marijuana and compared to real-time experience from its use for medical purpose.

Regulated marijuana legalization for medicinal and industrial uses have remained a great deal of debate for various reasons. While countries that legalized marijuana have reservations about its health and social effects, countries considering the legalization still hold various perceptions about it (Luginbuhl, 2001). Perception has played a key role in most counter-culture human right activities like the legalization of same-sex marriage. Marijuana is a key focus area which presents a debate for and against its legalization. In African countries where legalization is still at the embryonic stage, perception based on religion, culture and unknown beliefs without any verified proofs have played key role in most choices in community and country development.

While the chunk of the attention about marijuana focuses on the negative side, it is noteworthy that the (un)known benefits cannot be overemphasized. The therapeutic potentials as well as cancer chemotherapeutic benefits of this plant are not limited to effective treatments of tetanus, convulsive disorders, neuralgia, migraine, dysmenorrhea, post-partum psychoses, senile insomnia, depression, and gonorrhoea, as well as opium or chloral hydrate addiction. However, individuals dealing with terminal cancer can be treated with marijuana (Grinspoon, 2001; Mikuriya, 1969).

In the field of medicine, marijuana has been found as one of the important plants with significant health benefits with little or no psychoactive effects when the desired doses are given. This study provides an anecdotal observation towards a more rigorous and scientific research on how medical marijuana has provided a cure for migraine. Medical history and human health emphasized how mild or severe headaches have afflicted humanity (Baron, 2015; Russo, 1998). However, there is no single reliable pharmaceutical cure or full treatment for migraine. Instead existing painkillers only provide relief to mankind with several side effects. The use of marijuana for treating migraine has been well documented in the scientific literature (Baron, 2015; Baron et al.,, 2018; Rajapakse Davenport, 2019). The rest of the paper provides empirical evidence of the effect of marijuana on migraine; how the phenomenological framework is incorporated in unpacking the evidence, and finally, an anecdotal case-based self-reported narrative analysis on the effect of marijuana on migraine.

Medical marijuana and migraine

Recent discourse around migraine has drifted from finding a cure to understanding how it occurs with the advent of modern technology in the medical field and neurosciences. Both the hormones and chemical cells in the brain play instrumental role in migraine occurrence. In the human brain, specifically the hypothalamus, when there is overutilization of the neurotransmitters that leads to the release of vasoactive peptides, the neuro receptors that connects the head and the neck regions come under threat which results in inflammatory disorders like headache, severely recurring ones that can be considered as migraine (Lochte et al., 2017).

Other theories of migraine points to the fact that, "migraine pain happens due to waves of activity by groups of excitable brain cells. These trigger chemicals, such as serotonin , to narrow blood vessels. It can cause narrowing of blood vessels throughout the body. When serotonin or oestrogen levels change, the result for some is a migraine. Serotonin levels may affect both sexes, while fluctuating oestrogen levels affect women only". Given the monthly variations in hormonal levels among women due to their menstrual cycles, they tend to have higher propensity of experiencing migraines than their male counterparts (Stewart et al., 2008; Waters and O'Connor, 1975).

Recurring severe headache and migraines are major public health issues with debilitating effects on the individual, as well as substantial household and societal costs. While there is still ongoing scientific research in phyto-physiology, headache and migraine, marijuana has been found as one of the important plants with significant health benefits with little or no psychoactive effects when the desired doses are given. This section reviews scientific literature in the role of marijuana in migraine treatment. In the pain medical pharmacopoeia, medical marijuana has played significant role in treating chronic pain including migraine in humans, despite the anecdotal nature of the evidence (Bachhuber et al., 2014; Russo, 2007). This acts through the endocannabinoid system by rebalancing the physical build-up and break-down of the cells, fighting diseases and chronic pain (Bachhuber et al., 2014; Vandrey et al., 2015).

Theoretical and empirical literature provided consistent findings that migraine patients under marijuana treatment have experienced positive significant results with lower propensity, frequency and intensity of migraines experienced again after the treatment (Baron et al., 2018; Rajapakse and Davenport, 2019; Russo, 1998). These existing pieces of evidence therefore serves as a useful point of departure for a more extensive research on marijuana and its medicinal value. Therefore, providing a better cure with less or zero associated risks hinges on intensive research.

Husserl's phenomenological model

Following Husserl's transcendental constitutive phenomenological framework, the work examined the lived experiences of an individual using marijuana to treat migraine as against the use of pharmaceutical drugs. This approach provides a vivid description without obscuring preconception or hypothetical speculation (Husserl, 1970; Sanders, 1982; Dukes, 1984). This is a form of a paradigm shift from societal facts about marijuana mostly gloomed with biases to essence of using the plant from the user's viewpoint. This framework helps the researcher to suspend all forms of abeyance of belief systems about marijuana, its use and effects in the transcendental world. All in all, the phenomenological approach used in understanding the interaction between medical marijuana use and migraine provides an understanding and the essence of individual's decision to use medical marijuana as a result of insight gained from personal experience. In order to assess the effect of medical marijuana on self-reported wellbeing (using migraine as a proxy), the paper draws on a case-based approach to narrate an individual's experience with medical marijuana for migraine treatment.

Data and model

Drawing on a single case in-depth interview, the paper used both narrative and discourse framework to analyse the effect of medical marijuana on a migraine patient. The current paper acknowledges the underlying methodological challenges in terms of validity and reliability in achieving methodological rigor. That notwithstanding, this approach is deemed necessary as it only provides a preliminary narrative report of an ongoing research with relatively higher number of observations among other research protocols in order to meet

the scientific standards of qualitative research.

Findings: Past experience with migraine

This section provides a narrative of an individual respondent who has been dealing with migraine. It focuses on the historical perspective of the migraine condition. He accounted by saying that:

I have personally heard about migraine; however, I have not had any family members with it, aside from my mum who consistently dealt with flu among other sinus allergies. When I first discovered my headache was actually a migraine, it began with severe recurring headache which can last for days. This has been with me for over a decade which later expanded to affect my eyes. I started experiencing pressure on my eyes, however, my thoughts convinced me that it is actually because I have smaller eyeballs which need little sunlight than the normal. Over the years, I have struggled with this pain. Part of me believed it is due to the hours I spend with computer screens and phone devices. I had no option than to come to terms with this situation, although it was a thorn in my flesh. It affected my eyes to the extent that I had to resort to medical eye glasses to restore and correct the damage caused. It made me feel I was born with underlying health conditions. Sometimes, my friends make a joke out of it to even call me, 'an adzakpako dadaba' which means a rich kid born in a poor family. This migraine situation prolonged and has been persistently excruciating, despite the numerous pharmaceutical remedies prescribed by physicians, friends and family relatives. While my case may sound an idiosyncratic one, I have met people who share similar, if not stories with me and actually understand my plight as a migraine patient.

Pharmaceutical drugs and migraine treatment

The individual narrated his personal experience with pharmaceutical drugs. He acknowledges that:

Resorting to pharmaceutical drugs for any health-related issue has remained the culture of modern civilization. I am not excluded from this assertion as I am an individual who remains the 'doctor's friend'. This is so, because I have visited the hospital several times. At a point, I found an optometrist asking for both of my hands for a word of prayer as all my laboratory tests appeared normal but my system functioned abnormally. It remained a puzzle to know which part of me needs a natural factory reset, or better still, must undergo reconstruction. I even felt guilty that they may feel I have been faking my unhealthy condition. However, in reality, I have not been fit in a healthy sense. In effect, I found myself taking pharmaceutical drugs frequently. My system became used to such remedies and it became a lifestyle. I saw myself moving from headache to migraine; from flu to sinus and from eye itches to eye problem. The pharmacy became my second most frequent place of visit, aside my lecture halls. I must say, pharmaceutical drugs have been good to me and remained my great allies. That notwithstanding, I have moved from a lower schedule of prescription to relatively higher schedules for the same treatment. This means my body and system became acclimatized to these medicines and, therefore, had little effect on alleviating my health issues. Despite the relief, I have always been worried about the negative side effects these drugs come with, as I am mindful of how opioid related deaths are skyrocketing. It became a mixed-feeling as I cannot also do without these drugs. Later, I developed physical dependence on these drugs and my Avamys nasal spray that serves dual purpose became a useful tool like my toothbrush on a daily basis. I could vividly recall the words of my doctor, "put your nasal spray close to your toothbrush… even if you do not have any migraine, sinus, use it consistently". These words from my doctor made me understand that I cannot undo my health condition, instead, I must officially and unhappily come to terms and live the remaining life I have left peacefully. I must say, it became frustrating as I continued to climb the academic ladder and I needed good health and a peaceful mind to focus. What I know about pharmaceutical drugs in my life is the fact that they provide me with temporal relief without curing my migraine, eye pressure and sinuses. This means that I must constantly take these drugs to feel relatively better. At a point, the drugs do not function anymore as my body is used to it. I had to rebook appointments with my doctor in order to get an upgrade and perhaps, try new potent drugs my system is not used to. Trust me, it has remained a constant and daily battle, knowing I am going to bed only to wake up with migraine, even when I take pharmaceutical drugs.

Medical marijuana and migraine treatment

A better understanding of how medical marijuana interacts with the human body and brain to cure migraine has been highlighted. The respondents accounts that:

Growing up from a typical Christian home, the perceived negative effects of so many things had been projected to us by our guardians. Key among them are; 'smoking will make you go mad, weed will make you grow mad or become an irresponsible person in society' among other superstitious beliefs. As kids, we had to accept without questioning how that happens and who actually is a victim of such claims. This has been permanently registered and cemented in the finest part of our mental faculty, irrespective of the amount of education, knowledge and exposure we have had as individuals. We have lived with these perceptions and stigmatize people for no reason. Till late last year, my entire perception about marijuana had been lop-sided, biased and negative which is deep-rooted in the thoughts I had been fed with when I was in my formative years. One day in South Africa, I accidently found myself in an unplanned seminar where a professor was presenting on marijuana. Being curious given the already existing perception I hold about the plant; I threw a series of questions to hear both response and to observe reaction. I came out of the seminar room with a full conviction, hope and smiles that I was finally divorcing with my migraine I experienced persistently. For a few seconds, I reflected and pondered over my life only to remind myself that, 'my friend, you don't even drink alcohol and you are here thinking about using weed'. There and then, I realized how stigma and perception can mentally paralyze the minority group and relegate them into some smaller unhappy brackets of life. This has led me into serious research and readings just to advance in knowledge on the history of marijuana, its medical and industrial uses as well as how the political and legal landscape has evolved over time. I began to ask myself, "why would a plant that can clothe, fuel, shelter, feed and medicate be made illegal". The rest of it has been an amazing and enriching encounter I experienced personally. It took a bold, unshakable out of the blue decision for me to give marijuana product a try to observe and experiment how it will react with my migraine, sinus and eye pressure. When I first took two mouth-full sips of a bottle of juice made of marijuana and fruits, that night, 45 minutes after I took the juice, I could feel a burden lifted off my skull, a movement through my spines deep down to the tips of my toes. In fact, that feeling is yet to be described with the right words. There is just no human language to capture these feelings properly. My night was sound, smooth and peaceful than any of my nights. I woke up in the morning extremely excited, filled with laughter and fully energized. The entire day was a memorable one full of life. My entire system reconfigured back to normal with my level of productivity on another degree without the feel of any stress. This lasted for a week before returning to another sip. What I realized was that, marijuana did not only cure my migraine, but also, it reset my entire body and mental faculty to a relatively normal state while increasing my happiness and pleasure levels. It is important to note that, given the relatively higher THC strain in the juice, I felt a bit 'high' but this is manageable as I was able to go about my usual activities.

Comparative assessment of both treatments

This section provides a comparative narrative of both pharmaceutical drugs and medical marijuana in the treatment of migraine. In the words of the respondent:

My migraine journey has been a dreadful one which has affected my health for long. Both pharmaceutical drugs and medical marijuana have played a significant role in providing me with relief. Medical marijuana has provided me with cure while pharmaceutical drugs have given me temporal relief; unlocked other parts of my mental faculty while reconfiguring my entire body system. In terms of dosage, pharmaceutical drugs have enough information that guided me during my periods of medication while this is not so for medical marijuana. In effect, the tendency to (un)knowingly abuse it is high. In terms of side effects, I realized I developed physical dependence on pharmaceutical drugs for my migraine as it does not provide permanent solutions. Therefore, my chances of experiencing opioid related side effects were high as I depend on it daily for relief. Unlike pharmaceutical drugs, medical marijuana does not have such side effects, especially CBD-rich marijuana which does not intoxicate since there is no dopamine release that may lead to euphoria, psychosis and schizophrenia. In terms of cost comparison, I may not be able to recall the exact amount I invested into pharmaceutical drugs, however, given the consistency in purchase, I am able to give a rough estimate. My Avamys nasal spray costs US$20 which I need two every month. For the past 10 years, I would say I spent on the average, US$4000 on just the nasal spray without accounting for hospital consultation fees, my eye glasses among other pharmaceutical drugs which also cost me a lot. Unlike the above, a once-off purchase of a bottle of medical marijuana juice that cured my migraine is estimated at US$20. It is therefore clear to me that pharmaceutical drugs did not only pose a health threat to me, however, they also slapped a severe and prolonged monetary cost which could have been reprogrammed into other viable businesses for better returns. Another area of interest is the time involved in accessing both pharmaceutical drugs compared to medical marijuana. Every typical African knows the structural vulnerabilities and institutional bottlenecks in our various sectors of which the health sector is inclusive. The waiting queue, delays in laboratory tests and the headache of waiting on pending results before seeing a physician has remained part of the leading causes of exacerbated health conditions and at worse, deaths among unfortunate patients. Key among the precursors is the infrastructural deficits, low doctor-patient ratios; whereas medical marijuana needs relatively less time to learn about the plant, understand the strains and align one's health condition for a better treatment. It can be made available in any quantity, anywhere and any strain to match any underlying health condition with minimum time and ease of delivery. It only took a brief conversation about my migraine with a colleague to know that medical marijuana can cure me whilst it took me a decade to understand that pharmaceutical drugs can only provide me with temporal relief.

It is important, however, to emphasize that the potency of medical marijuana has a positively strong correlation with the tendency to abuse its use. This is because most humans naturally live with the assumption that, 'if this makes me happy, then more of it will make me happier'. Despite the positive response from the respondent, the study is unable to disentangle the placebo effect from the real potency of the plant as well as issues of causality and correlation. This is likely to influence conclusions made as this is an anecdotal observation. In effect, a legitimate concern is raised about having a well-informed, research-driven knowledge and awareness before using medical marijuana for any health purpose.

Conclusion

Medical marijuana has numerous health benefits for a series of underlying health conditions in humans. That notwithstanding, the unending controversy over the growing use of medical marijuana has garnered attention within the research fields of public health, psychiatry and social welfare with little on the economic implications. Following a single case based in-depth qualitative study, this paper provides a preliminary comparative analysis between the use of both pharmaceutical drugs and medical marijuana to treat migraine. Migraine is caused by a series of activities by groups of overworking brain cells which trigger chemicals such as serotonin that narrows the blood vessels. While pharmaceutical drugs provide relief, they do not guarantee cure and also, they are mostly associated with negative side effects. More importantly, opioid related deaths have been on the rise with anemic effect on individuals dealing with chronic pain. And the cost of managing migraine with pharmaceuticals can be very prohibitive for the individual and society. Conversely, the use of a CBD-rich medical marijuana provides cure with other added benefits of relief from stress, anxiety and enhancement in productivity. However, the study is not able to disentangle issues of causality and correlation. In effect, a legitimate concern is raised about having a well-informed, research-driven knowledge and awareness before using medical marijuana for any health purpose. The current paper acknowledges the underlying methodological challenges in terms of validity and reliability in achieving methodological rigor due to the sample size and following the existing methodological protocols. The above notwithstanding, this paper only represents one case of a broader research that captures different dynamics of responses from individuals with different underlying health conditions. Future studies that extend the sample to include various racial profiles, sex and environmental factors, could help disentangle the causality and feedback effects of medical marijuana and its effect in pain management generally, and migraine treatment in particular.

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