

USE OF PSYCHEDELICS IN MENTAL DISORDER TREATMENTS

A review behind the past /present of psychedelics

DROGAS PSICODÉLICAS E SEU USO NO TRATAMENTO DE DOENÇAS PSÍQUICAS

Uma revisão sobre o passado e o presente dos psicodélicos

Abraão Paulino de Lanes Machado Pêgas¹

ABRAAOPLMP@GMAIL.COM

RUA 10, 732, ILHA DOS ARAUJOS, GOV. VALADARES – MG CEP 35020-650

<https://orcid.org/0000-0002-8543-7214>

UNIVERSIDADE PRESIDENTE TANCREDO ALMEIDA NEVES – SÃO JOAO DEL REI – MINAS
GERAIS

RESUMO

Este estudo tem como objetivo de trazer mais conhecimento sobre o uso de substâncias psicodélicas no Brasil. Tentei me aprofundar na história do LSD (semisintético criado pelo lendário Hofman), famoso desde os anos 60 e da Psilocibina, usado mil anos antes de Cristo. Procuro mostrar no artigo os verdadeiros perigos relacionados ao uso recreativo e qualidade de substâncias encontradas no Brasil e seus benefícios já comprovados cientificamente nos Estados Unidos, Europa e também em São Paulo, com o neurocientista Eduardo Schenberg. O diferencial deste artigo é que também possui excelentes materiais do caráter icônico da Redução de Danos no Brasil, Marcello Santos. Ele é responsável pela maior parte da conscientização sobre drogas em nosso país. Eu tento convencer o leitor de que drogas psicodélicas, pode vir a ser uma alternativa usada para tratamento da Depressão Maior sem resposta ao tratamento convencional

Palavras chave: LSD; Depressão; Depressão Maior; Tratamento para depressão; Psicodélico.

ABSTRACT

This study aims to expand knowledge about the use of psychedelic substances in Brazil. I tried to approach during the history of the LSD (semisynthetic created by the legendary Hofman), famous since the 60's and the Psilocobina, used 1000 years before Christ. I try to show in the article the true dangers related to the recreative use and quality of substances found in Brazil and its benefits already scientifically proven in the United States, Europe and also in São Paulo, with the neuroscientist Eduardo Schenberg. The differential of this article is that it also has excellent materials from the iconic character of Harm Reduction in Brazil, Marcello Santos. He is responsible for most of the drug awareness in our country. I try to convince the reader that LSD, when used in a doctor's office and in full follow-up with psychiatrists, can be used in the treatment of Major Depression without response to conventional treatment.

Key words: LSD; Depression; Major Depression; Treatment for depression; Psychedelic.

INTRODUCTION

LSD (Lyserg-saure-diathylamid) was first synthesized in 1938 and studied by its creator Albert Hoffman for years. Initially, it aimed to isolate active drug ingredients in its laboratory to test the toxic and therapeutic dose of the substance. With this, he discovered that ergot (ergotamine) could be found with LSD-25. The chemist and creator (Albert Hoffman) then decided to try it in 1943 to know its effects on the organism.

After the experiment, he realized that a low dosage of LSD can stimulate nerve cells. The LSD molecule is very similar to serotonin 5HT. Thus, it causes a biochemical imbalance in the body and allows us to know areas of the brain that can not be investigated during the natural balance of the body¹.

LSD is a semi-synthetic drug and has the same effects as some other psychedelic substances such as mescaline (derived from the Mexican peyote cactus that was used in a ritual older than language itself 5,000 years before Christ) and psilocybin (derived from mushrooms hallucinogens).

What they have in common are their psychopharmacological properties analogous to LSD. Another similarity is that both mescaline and psilocybin have been / are still used in religious practices for purposes of communication with the Gods. From the time of the Mysteries of Eleusis, which occurred between 4 BC and 6 AD, it was a secret religious ritual in which a psychedelic substance was used, or rather a potion called

kykeon that was made from ergot. produces LSD) and had as its purpose the encounter with the inner God².

These perceptions are so intense that they seemed to be receiving divine grace³. Sarcophagus was found with the potion kept in its own sophisticated containers for the time⁴.

However, the people who use this substance are intended for recreational use and since the 1960s it has been used as an illicit drug, but with a known pharmacological potential¹⁻³.

In the 1950s, Swiss Albert Hoffman's SANDOZ laboratories began delivering LSD pills to psychiatrists around the world for free, and suggesting that psychiatrists experiment as a way to expand their medical knowledge. It did not take long for them to receive encouraging returns from their effects⁵.

From that, more than 1000 studies were done only on LSD and its effects, a high number for the time. However, in 1971 the US classified it as a drug forbidden to be studied, it was limited to clandestine laboratories and few specialists⁵.

When it emerged as a psychotherapeutic, there were several expectations about its use. But it soon became known to the population that there was abuse of the drug that contributed to its ban in the United States and the main reason for discrimination for illicit drug status. The student movement created by Tim Leary, the famous woodstock, is the landmark of this era⁶.

But this can be explained by the indiscriminate use of a drug that was not yet fully known at the time with a powerful effect on consciousness². LSD is considered a psychedelic drug. This name arose because a psychiatrist of the 50's called Osmond defined psychedelic drugs as those that can expand consciousness, that is, think and feel differently than usual⁴.

Over time, these rates of abuse have been diminished by repeated drug experiments by users generating knowledge about their effects on the body and consciousness².

What is expected is that the more people drive drunk, the greater the risk of accidents. But, that's not what happened with LSD. According to Hoffman, the number of incidents involved with this hallucinogen did not show significant changes.

"Although LSD has become popular in the decade and is well known, psilocybin has been used since 1000 BC"⁷ and because of this I will comment a little about the studies related to it, since it is by far considered similar to LSD.

PSILOCYBIN

Psilocybin, an active and present in more than 100 different species of hallucinogenic mushrooms, has already been used for research purposes. The Englishman Robin Carhart- Harris has been researching this substance for years and has been obtaining satisfactory results on its therapeutic use.

He has already conducted several surveys and is still continuing to seek treatment for depression and it is estimated that by 2024 psilocybin will already be used as an alternative to treating severe depression. Robin and the scientists who worked with him concluded that psilocybin has effects very similar to those of LSD 25, and with that, it has been studied as a possible alternative treatment in depressed patients, alcoholics and schizophrenics¹.

The most striking result was a study in which treatment of patients with depression for 6 weeks with escitalopram was performed by one group and the comparison group was treated with only one dose of psilocybin.

The result was positive. Robin came to the conclusion that in 47% of cases at the end of the experiment, patients treated with psychedelic had a more confident stance that they could overcome the disease⁸.

PSYCHODEAL DRUGS IN:

BRAZIL

The use of psychedelic substances suffers many prejudices and suffers from bureaucracies that should not exist. According to Eduardo Schenberg in an interview with Beny Smith in 2019, psychedelic drugs are still a big taboo due to their prohibition and the biggest difficulty is the lack of information from the research committees regarding Brazilian law that legalizes research on controlled substances and lack of investment in this area.

He (E. Schenberg) is leading a research with MDMA in Brazil, with a substance also psychedelic (understand psychedelic as manifestation of mind) beginning in mid-2017 and the first results are already satisfactory. He has been conducting research with patients suffering from post-traumatic stress syndrome refractory to conventional treatment, with patients suffering from the most diverse types of trauma (extreme violence, rape, assault, kidnapping, armed confrontation, sexual abuse, moral, physical and psychological).

Post-traumatic stress syndrome, which is characterized by sudden panic attacks due to anxiety or suffering, has astounding suicide rates as high as 70% and patients are living in mental conditions that can not be decompressed with human life.

In Brazil, there is currently no research on the use of lsd 25 as a psychotherapeutic. However, in 1961 the Brazilian Paulo Luiz Vianna Guedes published his work in the area that obtained satisfactory results. His research was aimed at patients with different degrees of neurosis, from an LSD therapy. With this study, he was able to conclude that lsd helped the patients who presented this disease to remember their anguish that had plagued them since childhood and to look at them from a new perspective. Only one of his patients who had a great ability to keep this memory (but later managed to express what it was) failed to enter the process of depersonalization that will be discussed later⁹.

EUROPE

Until the beginning of the current decade, studies on lysergic acid were virtually halted worldwide and restricted to only a few researchers in Europe and so have not gotten many discoveries since. In the last five years there has been a growing number of studies that place LSD as a great choice of psychotherapeutic drug⁵.

HAZARDS TO RECREATIONAL USE OF:

MDMA

The use of psychedelic substances recreationally creates unique experiences in a person's

life. However, in a survey carried out by FAPESP and the Federal Police, more than 50% of ecstasy tablets seized do not contain MDMA and the other half is MDMA mixed with contaminants, which are very harmful to the health of users¹⁰. This means that the dangers of MDMA treatment in the office will be minimized by the use of pure substances.

LSD

In the book by Albert Hoffman, there are several examples of people who have used LSD for self-experimentation. By analyzing the accounts in the first-person book, the people who reported their experiences always began to have feelings that referred to some unresolved personal issue, and the moments always began with a poor journey through power and lack of knowledge about substance².

It is very common for most users of LSD for recreative purposes to have the famous "bad trips" that makes many people feel afraid of this substance. Studies have already been conducted by James Fadiman, who created a book intended to be an "exploratory guide" to LSD and other psychedelic substances. He cites the 6 steps to have a favorable set & setting and consequently a good experience⁷.

DEPRESSION

According to cid. 10, recurrent depressive disorder is defined as: "Recurrent Depressive Disorder. A disorder characterized by repeated episodes of depression, as described for the depressive episode (F32 -), with no history of independent episodes of mood elevation and increased energy (mania).

According to the WHO from 2005 to 2015 there is an 18.4% increase in the world population with depression. It is estimated that this number can reach 322 million people worldwide. Japan is the country with the highest suicide rate in the world, in 2014 occurred about 25 thousand suicides. In Brazil today, there are more than 11.2 million victims of this condition and estimated that the numbers reach 10 to 18% of the population.

Because it is a multifactorial disease, it is very difficult to identify the true cause of depression. Most patients go to psychiatrists and lie their symptoms because they think that no one will understand their suffering⁴ and seek only drugs that "drug" them, whether to sleep better, calm the moods or get back to performing daily activities.

And in the world scenario we are experiencing that people are becoming increasingly disconnected by the soul and connected through the internet, it is a big problem. People are increasingly desperate to end their own suffering that end up opting to end their own lives.

Depression is a disease that grows exponentially worldwide and in some countries, such as Brazil and Japan, is already considered an epidemic and conventional treatments are increasingly in disuse. Psychedelic drugs are reemerging as a therapeutic possibility of alternative medicine combined with allopathy for the treatment of depression and other mental disorders as shown in Robin Carhart Harris's research on psilocybin with encouraging results⁸.

THE TRUE CAUSE OF DEPRESSION

Eduardo Schenberg attributes the social discomfort (difficulty of living with people, less public spaces such as squares and parks, families getting smaller, people increasingly living alone) as the main factor of depression in Brazil⁴.

THE PSYCHIATRIES IN BRAZIL

The problem in Brazil is the confidence of psychiatrists regarding the effectiveness of conventional drug treatment in mental disorders (such as depression). They believe that the symptoms are caused by genetic errors and correcting the genes is possible if they reach the cure⁴.

Geneticists believed and still believe that the symptoms are caused by genetic errors and correcting them would be possible to eradicate some diseases. Almost 40 years have passed since its discovery and many diseases that were already common had not yet been solved and others that already existed, worsened over the years, such as depression. This almost empirical and unanimous assurance among the class of psychiatrists causes much controversy and discussion⁴.

If we take this view into account, we will ignore all aspects of the individuality of the human being and ignore the form that has been conditioned. To do this is to disregard every psychological, emotional and spiritual side of the person as a human being who is liable to errors and doubts.

We are unique individuals conditioned by the family in which we are born, based on our culture and beliefs, which we experience and interpret differently.

This shows the need for a humanization of mental health to understand the patient as a whole. Professionals in the field are increasingly focused on symptoms and differential diagnoses and forget the psychological, emotional and spiritual factors experienced by the individual since birth. It is necessary for psychiatrists to label their patients less in ways that seek to understand a little more deeply the patient's history.

This fact, coupled with failure to adhere to therapeutic antidepressants (because of the numerous side effects and difficulty of adaptation) and socioeconomic-cultural conditions can be used as an explanation for this large increase in the number of depressed people.

STUDIES ON MENTAL DISEASES IN:

BRAZIL

In a study conducted by UNIFESP, Professor Jair Mário conducted a study in the capital cities of Rio de Janeiro and São Paulo, and found that 80% of the people living in these cities have suffered some kind of trauma, but only 5% (approximately 1m inhabitants only in 2 cities) develop post-traumatic stress disorder or panic syndrome.

From this study, it was possible to analyze that in people with PTSD and SP diagnoses, suicide rates reach 70%⁴.

IN THE USA

In a study conducted by John Hopkins in the United States, about 70% of patients who had successful treatment of PTSD had failed conventional treatments. Which shows great strength and that should appear until 2022 to doctors' offices⁴.

CONVENTIONAL TREATMENT X ALTERNATIVE

Eduardo Schenberg concluded in an interview for the doctor and scientist Beny Smith that mentally evolving directing our thoughts towards the good things recognizing our organism interaction with environment, makes our body cells work better.

For some people the drug treatment is good, works and does not generate difficulties because of its practicality. However, studies done and published by Goswami in 2004 confirm that the placebo effect is very effective (close to 50%) and makes us question the real usefulness of this drug therapy and seek more effective, safe and less side effects alternatives.

For the joy of person-centered medicine, psychedelic drugs is already a reality within the country with the research of Eduardo Schenberg in his research with MDMA.

Psychotherapy assisted with psychedelics aims to make the individual go through a depersonalization and create a possible context for a change in the way of living. Thus, the patient was able to feel conscious of his actions and to judge him by having a reasoning during and after being on the effect of the lysergic acid, being able to clearly identify the difference.

Imaging tests (magnetic resonance imaging) have shown that the effect of these psychedelics at their peak leaves brain connections less intense than most of the time. In the brain tonsils (responsible for feelings of fear and stress), for example, less blood circulates during the consumption of psilocybin and thus generating a lower response. The neural networks, which are responsible for the intelligible part of the cortex, are much more stable than before. This means that the brain, with the help of this psychedelic, takes on a more coordinated activity⁴.

With this coordination of the brain, it is to be expected that one has a greater capacity of the person to be able to deal with their daily life².

Thus psychotherapy assisted with psychedelics seems to have a huge potential to help patients' ego to undergo depersonalization and to create a possible context for a change in the way they live and experience trauma because the patient feels aware of his actions and is able to judge him in a different way because he has this ability to deal with the conscience. (why your users like the drug)⁸.

EFFECTS OF LSD IN THE ORGANISM

Marcello Santos, from a study done by Robin Carhart-Harris was able to summarize well its biochemical effects. He did so:

"It acts as a partial agonist of most serotonin receptors, except for 5-HT₃ and 5-HT₄ ... It is believed that psychedelic effects stem from the effectiveness of LSD at 5-HT_{2A} receptors. LSD also has efficacy in all dopamine and all adrenoreceptors. Most of

the psychedelic serotonergics are not significantly dopaminergic, so LSD is quite unique in this regard. The LSD affinity of D2 receptors has been shown to contribute to the psychoactive "

Serotonin 5-HT_{2A} is responsible for transmitting the stimulus to the brain area responsible for the sense of courage / coping of fear¹.

EFFICACY OF LSD

Albert Hoffman has proven that travel through LSD does not alter the originality of memories, and experiences are easily remembered with rich detail and reliability (due to better brain coordination). This shows a positive point in relation to the substance, because in several disorders the memory can suffer alteration, or even of the patient nor to remember the last consultation.

This was confirmed by a study published in the renowned scientific journal THE GUARDIAN (28/01/19) which is the continuation of the study carried out in 2016 by Robin Carhart-Harris (whose project counted on the participation of Schenberg)

Psychiatrist Katrin Preller, a researcher at the University Hospital for Psychiatry in Zurich, was able to prove in a survey of 25 patients that LSD causes information to flow more into the thalamus. The thalamus is responsible for transmitting information in brain. However, the thalamus without the psychedelic effect can not flow as much information (or can not). Katrin stated that "the world around us is not the world we perceive, because the thalamus filters what it considers to be irrelevant information. We do not necessarily perceive everything that exists, because that would be an overload of information."

The History Chanel documentary explained this effect in a more practical way. It's as if our thalamus saw 1.2 million kbs per second. But to make life easier and not fill us with information, it filters, so we can "see" 112 kbs per second.

These evidences show that the psychotherapeutic effects of LSD are great and for Marcello Santos, founder and creator of the largest group of Harm Reduction in Brazil - PreParty, considers it as a "psychoanalytic" drug.

Under the effect of the substance, it is possible to experience again a traumatic childhood, his own birth, among others.

It is therefore more rational to use a powerful drug capable of making the brain function more orderly to create a favorable psychological context with the possibility of exploring the inner self. It makes it possible to make neural impressions very quickly and thus "reprogramming" the brain. This reprogramming is the way to cure this treatment¹¹.

QUESTIONNAIRES IN RELATION TO THE USE OF PSYCHEDELICS

It is notorious that because it is a hallucinogenic drug, considered illicit, several questions are asked about its efficacy and risk. As Hoffman tested and proved that it is a substance that does not cause physical dependence and is considered a drug class with a very large therapeutic window. And to understand its effectiveness, one must understand the relation of the body to depression.

THE BASIS OF PSYCHOANALYSIS

For this, I chose the phrase (Lowen 78) that characterizes depression "a depression reaction occurs when illusion collapses in the face of reality."

Matos analyzed the meaning of the phrase in relation to depression and made it so: "In the dictionary, the word depression is defined as something below the level, and, the verb depresses, means to lower, to down - to cause pressure down. By accepting this semantics

of the word depression, we can question what the depressed patient is pushing down that can cause their illness. " Because of this, symptoms of depression begin to appear¹².

And this talk of Matos is very similar to Freud, who viewed illness as repressed emotional thought and healing as an awareness of repression. He meant that when we suppress a feeling to the unconscious, we create blockages in the flow of our vital energy (energy that makes us live). These blockages result in disordered functioning of the organs when we have conscious experience of the disease, but we do not perceive the energy blocks responsible for the disease, causing a process of general cellular hypofunction (and also the psychosomatic symptoms of depression). That is why it is easier and feasible to teach people to take good care of their health and to have healthy physical and mental practices than to expect genetics to solve all diseases.

Amit Goswami, an Indian physician, pointed out in his book *The Quantum Physician*⁴ that there is evidence that breast cancer is associated with unsatisfied / frustrated / unhappy women, explaining the disease as repressed emotional thinking that is the fruit of our consciousness .

The theory of healing as awareness of repression is encouraging and suggests that if women are happy in the future, breast cancer will not exist. And this calls for the doctor's approach to be increasingly human and patient oriented, as it is proven that a good patient medical relationship makes a total difference in the patient's healing process⁴.

LSD Treatment

As LSD acts on consciousness, and its "twin sister", psilocybin is being increasingly studied, it seems feasible to study it as a possible psychopharmacological alternative.

The use of psychedelic drugs and associated with psychotherapy can help the person to gain autonomy of thought free of suffering from a possibility of profoundly altering a traumatic / depressive memory and being able to feel integrated again with himself, experiencing again the good feelings⁴.

Effects on the Brain during the healing process

What happens is that the brain has a "lock" that does not let our negative neural connections break, and so the person remains trapped in the traumatic thoughts. Hence the need to associate this psychedelic substance responsible for leaving the brain connections ordered, facilitating the breakdown of negative brain connections and the healing process³.

Being aware of this blockage of the flow of energy is essential for healing and is only possible when the person perceives the action of his consciousness. Beginning to review the experiences of the past is something that can bring great personal knowledge. And LSD allows us to wander into consciousness and succeed in bringing up past feelings, disappointments, which are essential for the formation of insights. (HOFMAN 80)

The formation of these insights (also called intuition) leads one to reflect on one's own psycho-emotional process, one's own personality, one's memory and marked events. They are important and necessary for patients to produce their own healing, a creative quantum healing (deepak chopra), a sudden intuition⁴. In psychotherapy with psychedelics a similar methodology is also used, both with the intention of causing the patient to produce his cure.

In 1983, Weil described the case of a patient who had stage 3 Hodgkin's lymphoma and who was pregnant, underwent radioactive treatment without success. She went on an LSD assisted trip. During the procedure, the doctor encouraged her to delve deeply into herself and communicate with the life that developed in her womb. The patient was able to communicate when the doctor asked her if she had the right to interrupt her new life, and from there she had the insight that she could choose to die. The cure was not immediate, but with lifestyle changes and psychoanalysis she cured of cancer and gave birth to a healthy child.

This case is undisputed which demonstrates that we have the ability to choose our own reality, but to make that choice we need to be in a nonordinary state of consciousness. That is, it needs to be illuminated.

Then the question arises: can we then choose health instead of disease? YEA. As long as we develop the capacity to transcend the ego and to elevate ourselves to the unitive consciousness⁴. Hoffman, Doors of perception, Léo Matos, Sidarta Ribeiro

The voice of conscience directed by a well-trained, experienced and ethical psychiatrist or psychotherapist achieves consciousness when assisted by the psychedelic, and thus manages to direct the patient to guide his or her own healing process⁴.

CONCLUSION

Based on the arguments used in this article, it is possible to affirm that LSD is rather a possible therapeutic tool to be used in cases of treatment-resistant major depression if used in a medical context, such as psilocybin in the United Kingdom, MDMA in the United States and Brazil, Ayahuasca in indigenous tribes and shamanic rituals.

The main objective of this article is to expand the theme in the Brazilian medical community, so that in the near future it is possible to carry out the study with this substance in our country and increase the range of possibilities with a quality material and in the near future it is possible to treat the depression with LSD.

REFERENCES

1. Carhart-Harris RL, Nutt DJ. Serotonin and brain function: a tale of two receptors. *J Psychopharmacol*. 2017 Sep;31(9):1091-1120. doi: 10.1177/0269881117725915. Epub 2017 Aug 31. PubMed PMID: 28858536; PubMed Central PMCID: PMC5606297.
2. Hofmann, Albert. *LSD, My Problem Child: Reflections on Sacred Drugs, Mysticism, and Science*. Los Angeles: J.P. Tarcher, 1983.
3. Huxley, Aldous. *The Doors of Perception*. New York: Harper & Brothers, Publishers, 1954.
4. Schenberg E. Drogas Psicodélicas | Eduardo Schenberg conversa com Beny Schmidt - Mais Comunicativa [Internet]. 2018 [cited 20 June 2019]. Available from: <https://youtu.be/CItpkT0QCE0>
5. Wolfe T. Getting high - The History of LSD [Internet]. 2012 [cited 20 June 2019]. Available from: <https://youtu.be/CRrmqySNBFI>
6. The Sunshine Makers. New York: Packer; 2015
7. Santos M. LSD VS Cogumelos [Internet]. 2018 [cited 20 June 2019]. Available from: <https://www.preparty.com.br/forum4/index.php?topic/679-lsd-vs-cogumelos/>
8. Psilocybin with psychological support for treatment-resistant depression: an open-label feasibility study Carhart-Harris, Robin L et al. *The Lancet Psychiatry*, Volume 3, Issue 7, 619 - 627
9. Guedes Paulo Luiz Vianna. Experiências com a dietilamina do ácido lisérgico (LSD 25). *Arq. Neuro-Psiquiatr.* [Internet]. 1961 Mar [cited 2019 June 28] ; 19(1): 28-34. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0004-282X1961000100004&lng=en. <http://dx.doi.org/10.1590/S0004-282X1961000100004>
10. Silva A. Técnicas de análise da Química Forense [Internet]. 2019 [cited 20 June 2019]. Available from: https://www.academia.edu/16093686/Artigo_-_T%C3%A9cnicas_de_an%C3%A1lise_da_Qu%C3%ADmica_Forense
11. Santos M. Uso de psicodélicos em transtornos de percepção mental [Internet]. 2018 [cited 20 June 2019]. Available from: <https://www.preparty.com.br/forum4/index.php?topic/1130-uso-de-psicod%C3%A9licos-em-transtornos-de-percep%C3%A7%C3%A3o-mental-tdi-toc/>
12. Souza Fábio Gomes de Matos e. Tratamento da depressão. *Rev. Bras. Psiquiatr.* [Internet]. 1999 May [cited 2019 June 28] ; 21(Supl 1): 18-23. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1516-44461999000500005&lng=en. <http://dx.doi.org/10.1590/S1516-44461999000500005>
13. Goswami A. *O Médico Quântico*. São Paulo: Cultrix; 2006.~

