

## **Cocaine paste and cannabis in the field of mental health in Chile. Clinical observations and scientific evidence.**

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The use of some drugs in Chile remains silenced. Very little is said about certain substances in political and academic discourses and in the media, in spite of the fact that a considerable percentage of the population uses them on a daily basis. This is particularly the case with alcohol, cocaine paste<sup>2</sup> and benzodiazepines, of which the health risks entailed in their use are not always pointed out. On the other hand, at present, the most talked about substance is the psychoactive plant *Cannabis sativa*, of which a wide variety of –and often contradictory– information is communicated in the aforementioned speeches.

It is important to point out that not all political discourse and mass media communications say the same things about these drugs. Very little is said about the risks involved in alcohol and benzodiazepine consumption, while on cannabis two opposing stances are present: one completely in defence of its medicinal properties, and another in absolute defence of its risks. As for the academic line, it is worth mentioning it does not tend to meddle in conversations of political impact regarding substances in general, thereby remaining in the arena of theoretical knowledge, showing a clear tendency to emphasize the negative aspects of using.

Nonetheless, these discourses do say something, and it would seem their greatest interest lies in the damage generated by the drugs they talk about. This has made it pertinent to clinically and psychotherapeutically observe the way some of those substances make their appearance on the scene of Chile's public mental health system, in order to ascertain the types of drugs –and their associated problems– people inquire about, as well as their state of health upon soliciting treatment when in an addictive relationship with one or more substances<sup>3</sup>. This will allow us to draw comparisons with what the aforementioned discourses point out as health problems.

By taking one of the health centres in the northern area of the Metropolitan Region as an example, the Mental and Family Health Community Centre (COSAM in

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<sup>2</sup> Cocaine paste is a stimulant made from a combination of substances elaborated during the extraction process of alkaloids from coca leaves. It is estimated that on average after two months of regular consumption, users present compulsive behaviour in the search for and use of the substance, potentially even leading to psychotic episodes. For more information refer to: Pérez, J. (2003). Clínica de la adicción a pasta base de cocaína. *Revista Chilena de Neuro-Psiquiatría*, 41(1), 55-63. doi:10.4067/S0717-92272003000100007.

<sup>3</sup> It is worth mentioning that not all drug consumption requires treatment, given that not all substance use entails dependence. In fact, an addiction is not established because this is a substance's intrinsic quality, but rather it develops as of the relationship a person establishes with the drug. This distinction places the present text within the realm of severe dependence to certain drugs, following the ICD 10's diagnostic criteria.

Spanish) located in Colina<sup>4</sup>, we are able to carry out some interesting observations. For the reader's benefit, it is worth noting that most of the Chilean population attends public health institutions such as this, since those organisms tied to the private system are more expensive, and are therefore out of reach for the majority of Chileans.

The relevance of this issue resides in that the population visiting centres such as COSAM in Colina, corresponds to middle and lower social classes (to which most Chilean belong), some even being homeless. Taking this into consideration allows one to understand the relationships established between certain social classes and certain drug uses, since some contexts develop particular substance consumption patterns and health consequences that other contexts do not. It follows then, that considering social class as a category affecting substance access, in a country where this classification determines the choices available in people's lives, proves fundamental. In particular, social class makes a difference on the type of substance accessible, its purity, cost, kinds of use, the kind and level of deterioration in health and quality of life presented as consequences of an addiction, amongst others. For this reason, severe dependence experienced in the context of Chile's upper classes will be very different from that experienced in the lower classes.

With these considerations in mind, one can understand how it is that certain health problems occur across the population –what the dependences<sup>5</sup> are like– as well as the particular difficulties facing each social class when making decisions about drug use, both regarding the upkeep of a habit as well as ending it.

Taking social contexts into account not only allows localising health problems, but also understanding that within each of the country's regions diverse social realities coexist, implying a variety of experiences associated to substance use and addiction treatments available. It is for this reason that this particular text does not pretend to draw generalizations on the whole of Chile's population, but will rather locate specific and emerging clinical observations on the psychotherapeutic work carried out in the stipulated health centre, whose patients are mainly socially excluded people living in poverty.

This group of people is isolated from various services and life options, which translates into a context that makes addiction to drugs more severe and permanent, and therefore more difficult to treat. It follows then, that social contexts and class in particular, make it easier or harder to relate differently to substances, helping or hindering alternative relationships.

So it is, that the population of Colina's COSAM considered here, is only a mere sample of the kinds of addiction that can be found in public health institutions that work with marginal and poverty-ridden populations in Chile.

Further ahead, after having completed a few clinical and psychotherapeutic observations present in this context, we shall develop our text in conjunction with recent scientific information that could be linked to the observed phenomena. In so

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<sup>4</sup> It is important to point out that I worked in this institution as a clinical psychologist for 6 years (from 2007 to 2013), carrying out psychotherapeutic treatments for drug users as well as for people with severe psychiatric disorders, that is to say, cases of psychosis and epilepsy amongst others. The observations presented in this text should therefore be situated in the context of this clinical setting.

<sup>5</sup> We apply ICD 10's criteria, that is, international psychiatry norms, to determine the dependence on psychoactive substances.

doing we will show possible connections between one field and another, in an attempt to comprehend what might lie behind said manifestations.

It is worth noting that it is not our intention to establish causal explanations in terms of truths between observations pertaining to the clinical-psychotherapeutic and scientific fields, but rather the idea is to reveal the clues that may help to understand the clinical and social phenomena displayed here. It is for this reason that our wish to understand what may be occurring in this specific context, will lead us to review some updated scientific publications related to these issues.

Furthermore, the exercise of understanding possible bonds between clinical and scientific fields may help us explore new questions on what political, academic and the mass media discourse consider as priorities in terms of the problems in the field of mental health related to drug use in Chile. The clinical observations will allow us to delve into a number of situations that do not coincide completely with present official speeches and the social imaginary dealing with drug use. For them, it would seem this drug use corresponds to a static and unique vision of reality, mainly tied to the use of cannabis as one of the main health concerns. This has become an ongoing fact because of the continued referencing to certain stereotypes that have been repeatedly socialized without any point of comparison to what actually happens in concrete places –such as in public health centres– resulting in a kind of institutionalization of a notion of drugs constructed as truth.

It is precisely this truth and its apparent immutability which we will bring under scrutiny, as of certain observations and their possible relationship to some scientific findings. It would therefore seem that the final object of this exercise is to remove part of what stands in the way of building drug policies situated and adapted to each context.

## **I.- Clinical observations of the use of cannabis in mental health**

### **1) It is not the main gateway drug**

One aspect commonly heard in current political, academic and mass media discourse is a preoccupation with the substance that initiates drug consumption in each person's life. The rhetoric links the very first drug used with all subsequent consumption, often called the *gateway* to other drugs.

Independent of whether this cause-and-consequence connection between first and subsequent consumption is actually true or not, this aspect becomes relevant to the degree in which it is prioritized as a guide to outlining public policy on drug use. It can therefore be understood that part of the concern with cannabis found in the discourse mentioned above is based on identifying this plant as the first drug in people's consumption history, therefore making it the gateway to other substances.

What was found in COSAM at Colina is that the majority of people seeking treatment for drug consumption state that the first substance consumed is alcohol, during childhood or adolescence, and not cannabis. This means that if one were to position a substance as the gateway to other drugs, that is, as the one to encourage further consumption, then alcohol should be the one to take this place; and this is without considering medication and other substances taken at earlier ages administered by parents or guardians.

## **2) Few and mild signs of withdrawal syndromes and low abuse potential**

The various withdrawal symptoms shown by drug users correspond to profiles related to the addiction potential a given substance may present. To the degree to which they involve a considerable deterioration of people's health and quality of life, the seriousness of these symptoms should guarantee them priority in the planning of public drug policy as related to psychoactive substances.

It would be appropriate to specify that not all drugs may generate an addiction or dependence, but those that do, do so in a determined manner, that is, they appear under a certain set of symptoms. This means that even though there may be a number of symptoms that can appear in several drugs' withdrawal syndromes, each substance is characterised by its own particular sequence of symptoms.

Due to this, one is able to characterise and differentiate each substance's withdrawal syndromes, and according to the extent to which they appear and influence different aspects of the subject's quality of life one can estimate an addiction's severity. It is important to point out, however, that these characterisations can only be done in general terms, since each person's uniqueness will also influence their symptoms' phenomenology.

In relation to the withdrawal syndromes manifested by the majority of those consulting COSAM in Colina who exhibited a drug addiction, dependence on cocaine paste and alcohol stood out, due to the high number of cases and their severity. At the same time, cannabis cases were noteworthy for the lack of inquiries and the mildness of their symptoms.

On this we can emphasise that both cocaine paste and alcohol present very severe conditions associated to ending their consumption. The former is characterised by a series of acute symptoms: stomach pains, weight loss, lack of sleep, visual and auditory hallucinations, extreme irritability, anxiety, anguish, paranoia, symptoms of depression and the idea of committing suicide in the worst of cases. This is the state many users are in when they resort to treatment, several having used for many years –some for over twenty– so the degree of physical and psychological deterioration those of us who work in the field face on a daily basis is unfathomable.

Similarly, alcohol's withdrawal syndrome also entails enormous physical and mental deterioration for consumers. Its main characteristics are: loss of appetite, stomach and headaches, sleep disorders, irritability, anxiety, anguish, symptoms of depression and suicidal ideation in the worst of cases together with the impossibility of ingesting any food. It is worth mentioning that in the most severe cases patients die if they are denied any alcohol at all, not only due to their physical habit but also because the body is no longer able to take in water or food. This is also commonly the case with many people who resort to the public mental health service.

By contrast, in cases of cannabis there have been no observations of severe physical dependence in Colina's COSAM, given that only a minimal amount of people have shown conditions of anxiety, with a few mild and acute physical symptoms. This translates into there being people who after having developed a habit, feel anxious about not consuming, and thereby maintain their habit as a kind

of medication for anxiety. It is worth pointing out that this has been called 'psychological dependence' and it may be found in the face of the suppression of any medicine meant to control anxiety, or equally when stopping the use of any object, person or activity that fulfils that anxiolytic function.

### **3) Self-medication as the objective and sense of consumption**

All of the uses of substances have a history and meaning. This becomes evident when reviewing each person's consumption experiences, where diverse events and features reveal the motivations and meanings associated to those instances. It is important to understand that the sense granted to those instances of consumption are mutable and contextualised within the particular moment of a person's life, therefore allowing this sense to change even though the kind of drug may remain the same.

Within the multiple alternative meanings that can direct the use of substances, it is very frequent to find interests related to self-medication. Therefore, the motivation for trying drugs, be they legal or illegal, is the search for physical and/or psychic wellbeing.

Regarding this, at COSAM in Colina we found a tendency in some people to spontaneously<sup>6</sup> use cannabis to diminish or appease the symptoms of some disorders.<sup>7</sup> Two cases seem of particular interest: people showing paranoid schizophrenia and people showing an addiction to cocaine paste.

Concerning those presenting paranoid schizophrenia, we note that even though they may be medicated and stabilised with drugs classically prescribed by psychiatry, some continue demonstrating symptoms associated to psychosis and its more paranoid qualities, such as a constant difficulty to establish social relationships and to contact others, a permanent feeling of being watched and of therefore needing to be on alert at all times, in addition to a lack of affectionate contact together with a difficulty to enjoy any situation, amongst others.

In the face of this prospect, it is interesting that some people diagnosed with paranoid schizophrenia use cannabis every so often to curtail these feelings. In these cases, one notices that cannabis is able to stabilise that which classical psychiatric medication is not able to balance, seeing as it allows them to establish relationships with others, enjoy and have fun in social instances, stop feeling threatened or watched, thereby releasing them from being extremely alert or paranoid. In this way, cannabis relaxes them, brings them into contact with others and ultimately helps them feel better.

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<sup>6</sup> Regarding these observations, it is interesting to recall psychiatry's Self-medication Theories, which propose spontaneous drug use as an attempt to strike a balance in terms of one's health. It is with the aid of these theories that this tendency to self-medicate and handle one's own consumption has been approached.

<sup>7</sup> A significant event worth mentioning in relation to the use of cannabis as medication, corresponds to the Chamber of Deputies acknowledging, while reviewing law N°20.000 on drugs, that this plant is used at present in three ways in Chile: as an analgesic, as a less invasive treatment for certain pathologies and in substitution therapies. For more information refer to: Departamento de Evaluación de la Ley. (2014). *Evaluación de la Ley N°20.000. Sanciona el tráfico ilícito de estupefacientes y sustancias sicotrópicas*. Chile: Cámara de Diputados de Chile. Taken from: [http://www.evaluaciondelaley.cl/foro\\_ciudadano/site/artic/20130709/asocfile/20130709144344/informe\\_ley\\_20000.pdf](http://www.evaluaciondelaley.cl/foro_ciudadano/site/artic/20130709/asocfile/20130709144344/informe_ley_20000.pdf)

Some people who demonstrate an addiction to cocaine paste indicate that the use of cannabis allows them to diminish the quantity and frequency of cocaine paste they smoke, as they gradually integrate the use of the plant over a period of days. This allows them to reduce the risks and harm associated with cocaine paste, given that they lower the intake.

Additionally, they are able to reduce the withdrawal symptomatology, as cannabis helps them calm the urge to use cocaine paste, as well as the irritability levels generated by the intensity of their urge, thereby relaxing their organism. They also mention that the plant grants them more episodes of sleep than during a period exclusively dedicated to the consumption of cocaine paste, explaining that cannabis gives rise to the desire for sleep. In a similar fashion, feeding habits are restored, since the plant triggers the desire to eat, allowing them to recover weight lost during prolonged spells of consumption of stimulants such as cocaine paste. Furthermore, some point out that the inclusion of cannabis diminishes the physical pain experienced during withdrawal.

With the passing of time, moreover, some are able to end their consumption of cocaine paste by maintaining a habit of cannabis consumption exclusively.

At a glance, it would seem there are three ways in which cannabis is used for self-medication. The first would be the use of this plant before consuming cocaine paste. This strategy not only avoids consuming the stimulant, but also diminishes the withdrawal symptoms associated with its absence. In point of fact, some users have described situations in which they were desperate to smoke cocaine paste, but upon smoking cannabis instead they were able to stay at home, sleep and even eat after the acute effects of cannabis subsided. These situations involving the use of this plant become relevant to users themselves, seeing as they acknowledge that had they used cocaine paste at that time they probably would not have slept or eaten at all on that occasion.

A second form of use would consist in using cannabis at the same time as smoking cocaine paste. This mixture between substances is known by these very same users as a *Martian*. This practice diminishes cocaine paste's stimulating effects, as it would appear that cannabis acts counteracts them, effectively, attenuating them. This also allows users to limit the amount of cocaine paste consumed, as the attenuating effect allows them bring the episode to a close rather than prolonging it for hours, days or weeks on end.

A third use would be to take cannabis after smoking cocaine paste, in such a way that not only is the consumption episode brought to a halt, but the stimulating effects of cocaine paste are also diminished, as well as those effects occurring as a consequence of frequent use, such as bouts of anguish and paranoia. Additionally, withdrawal symptoms are avoided that could otherwise appear as a result of cutting the use of cocaine paste during such an episode. Other effects noticed include increased appetite and sleep, both consequences of consuming cannabis.

In brief, we see that some cocaine paste users consume cannabis by their own initiative as a form of harm reduction, that is, as a therapeutic measure that allows them to improve their health and quality of life. These actions are not only visible in our group of people, but have also been sited with respect to crack<sup>8</sup> and

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<sup>8</sup> This substance is a derivation of cocaine that is less harmful than cocaine paste, which according to data provided by the Public Health Institute, also exhibits higher purity levels than the latter.

cocaine use in other countries, like Colombia, Argentina, Uruguay, Brazil, Jamaica<sup>9</sup> and Canada.<sup>10</sup> A few accounts are worth mentioning: a pilot study completed in Sao Paulo, Brazil, with excellent results<sup>11</sup>; the turn of events in Uruguay, where they have included cannabis in public policy to help regulate cocaine paste consumption; and a pilot study implemented at present in Colombia with the support of the mayor's office in Bogota.

In Chile, cocaine paste consumption is considered to be a social and public health problem since its appearance in the country during the 1980s. As of then this substance has spread throughout the country, becoming easy to access, above all in poor and marginal sectors.<sup>12</sup>

With respect to Chile acknowledging the use of cannabis as a strategy for self-medication by cocaine paste users, we can mention an exploratory study that deals with the acute symptoms related to regular cocaine paste consumption, where they point out that several consumers use this plant after the stimulant in order to diminish their levels of anxiety and get some sleep.<sup>13</sup>

Another research project also mentions cocaine paste consumers using cannabis as a means of diminishing the anguishing and stimulating effects of the former, as well as of avoiding having to consume the drug at all.<sup>14</sup>

## **II.- Scientific evidence of the therapeutic properties of Cannabis in mental health**

It is important to mention that at present there are scientific controversies and contradictions as to diverse aspects associated with the effects of cannabis, which is not to say there is no certainty regarding other aspects. These inconsistencies in science's discourse are due, to a large extent, to the differences

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Instituto de Salud Pública de Chile. (2011). Guía de pericias químicas en el marco de la Ley N°20.000. Taken from <http://www.ispch.cl/sites/default/files/Guia%20licitos>

<sup>9</sup> In an ethnographic study carried out in Jamaica, it was found that several women used cannabis to abstain from using crack, in addition to keeping their weight stable and caring for their children. For further information consult: Dreher, M. (2002). Crack Heads and Roots Daughters: The Therapeutic Use of Cannabis in Jamaica. *Journal of Cannabis Therapeutics*, 2(3-4), 121-133. doi:10.1300/J175v02n03\_08.

<sup>10</sup> At a medical cannabis dispensary in British Columbia it became evident that several consumers used this substance as a substitute for another. For more information refer to: Lucas, P., Reiman, A., Earleywine, M., McGowan, S. K., Oleson, M., Coward, M. P., & Thomas, B. (2013). Cannabis as a substitute for alcohol and other drugs: A dispensary-based survey of substitution effect in Canadian medical cannabis patients. *Addiction Research & Theory*, 21(5), 435-442. doi:10.3109/16066359.2012.733465.

<sup>11</sup> In this study carried out by Dr Dartiu Xavier da Silveira, cannabis consumption was maintained while treating 25 crack users who had tried to quit in previous treatments. 68% of them were able to quit crack by using cannabis, and several of them were then able to stop consuming cannabis as well. For more information: Labigalini, E., Rodrigues, L. R., & Da Silveira, D. X. (1999). Therapeutic Use of Cannabis by Crack Addicts in Brazil. *Journal of Psychoactive Drugs*, 31(4), 451-455. doi:10.1080/02791072.1999.10471776.

<sup>12</sup> Gaínza, A. (Ed.). (1997). *Futuro y angustia: la juventud popular y la pasta base de cocaína en Chile*. Santiago de Chile: Ediciones Sur.

<sup>13</sup> Pérez, J. (2003). Clínica de la adicción a pasta base de cocaína. *Revista Chilena de Neuro-Psiquiatría*, 41(1), 55-63. doi:10.4067/S0717-92272003000100007.

<sup>14</sup> Gaínza, A. (Ed.). (1997). *Futuro y angustia: la juventud popular y la pasta base de cocaína en Chile*. Santiago de Chile: Ediciones Sur.



between one study and another, that is, to the difficulty in comparing the various studies' results given their differing designs. Some of the aspects that mark these differences correspond to traits of the populations studied (education, use of other drugs, existence of physical or mental disorders, amongst others), to the methodologies used to collect information as well as analyse it, the administration route and dose used, and technological advances that allow for greater analytical rigor with the passing of time, amongst others.

However, most results of the latest scientific studies account for the anxiolytic properties of cannabidiol (CBD)<sup>15</sup>, a cannabinoid<sup>16</sup> present in the Cannabis plant that is being widely studied at present due to its multiple therapeutic properties.

At present it is known that CBD is not a psychoactive agent, so one does not get *high* off it as with THC.<sup>17</sup> Additionally, its tranquilising effect is also under scrutiny, which apparently is the result of it acting as an agonist<sup>18</sup> to serotonin receptor 1A(5-HT1A).<sup>19</sup>

There are also observations stating that endocannabinoids affect the release of neurotransmitters that act on anxiety. These cannabinoids correspond to those produced by the body itself, of which anandamide is the most widely known. So far, it is known that anandamide has anxiolytic properties and is being studied to treat post-traumatic stress. In relation to this we can point to work that has found greater levels of cannabinoid receptors in areas of the brain linked to anxiety and fear in women with post-traumatic stress.<sup>20</sup> These findings should confirm the therapeutic role of cannabinoids in such disorders.

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<sup>15</sup> This herbal cannabinoid was first isolated in the 1930s, but its chemical structure was first revealed in 1963. It stands out due to its anti-inflammatory and analgesic properties, thereby generating great interest in scientific research.

<sup>16</sup> There are three types of cannabinoids: fitocannabinoids, endogenous and synthetic. The first are found in the cannabis plant; the second can be found naturally produced in our organism and are called endocannabinoids; and the third type is produced in laboratories. This means that what defines a cannabinoid is not only the compound found in cannabis plants, but corresponds rather to any element that can bond with the endocannabinoid receptors in our organism.

The endocannabinoid system is comprised of endocannabinoids and their receptors distributed in various areas around our body, which allow cannabinoids to affect it. It is worth mentioning that CB1 receptors are located in the central nervous system and peripheral organs, while CB2 receptors are found in the immune and central nervous systems.

For more information on the subject we recommend: Grotenhermen, F. (2006). Cannabinoids and the Endocannabinoid System, 1(1), 10-14. Available online at: [http://www.cannabis-med.org/data/pdf/en\\_2006\\_01\\_2.pdf](http://www.cannabis-med.org/data/pdf/en_2006_01_2.pdf)

<sup>17</sup> This herbal cannabinoid is the psychoactive component in cannabis and was first isolated in 1964. It is the one to have been studied the most, as it is responsible for the plant's psychoactiveness, that is to say, for the feeling of getting *high*. Nowadays it is known it may have very different effects from one person to another, which is explained by its biphasic activity, referring to the fact that the effects vary according to the dosage. In this way, science explains that the effects of low doses can be the opposite of high doses, meaning that a person may feel relaxed in one case and more anxious in another.

<sup>18</sup> An agonist is a substance that is able to bond with a cellular receptor and activate its function.

<sup>19</sup> Mechoulam, R., & Parker, L. A. (2013). The Endocannabinoid System and the Brain. *Annual Review of Psychology*, 64(1), 21-47. doi:10.1146/annurev-psych-113011-143739.

<sup>20</sup> Neumeister, A., Normandin, M. D., Pietrzak, R. H., Piomelli, D., Zheng, M. Q., Gujarrro-Anton, A., Huang, Y. (2013). Elevated brain cannabinoid CB1 receptor availability in post-traumatic stress disorder: a positron emission tomography study. *Molecular Psychiatry*, 18(9), 1034-1040. doi:10.1038/mp.2013.61



Similarly, diverse scientific studies indicate that the endocannabinoid system operates as an antidepressant, as it has been documented that when its functions are diminished, a person's mood tends to worsen.

Also, it has been noted that in states of depression neurogenesis decreases, that is, the production of the central nervous system's cells decreases (neurons and glial cells), and endocannabinoids play a vital role in this as they are able to activate it. This in turn is why endocannabinoids are considered as playing a vital role as endogenous anti-depressants, and it is estimated that effective anti-depressants could be manufactured as of synthetic cannabinoids, synthesised by laboratories.<sup>21</sup>

Also within the properties of CBD recently discovered by the scientific community, of note are its anti-psychotic effects, for which more and more tests are being held in treating these disorders. On this subject we can say that its effectiveness in decreasing acute symptoms of schizophrenia has been evaluated, with very encouraging results.<sup>22</sup>

On the use of cannabis by some cocaine paste users, one could understand its functioning in terms of the anxiolytic, antidepressant and antipsychotic properties mentioned above. These qualities exhibited by cannabis may explain why it stabilises users' tempers, decreasing anxiety levels and irritability when feeling the urge to consume cocaine paste, as well as diminishing acute psychotic symptoms generated by the stimulant, that is, the visual and auditory hallucinations.

Moreover, cocaine paste users speak of a decrease in the physical pain associated to this drug's withdrawal symptoms, possibly due to cannabis' analgesic properties.<sup>23</sup>

It would appear that the psychoactive effect of THC also allows cocaine paste users to replace the subjective effects of one drug for the other, although scientific research has not yet clarified this issue.

### **III.- Risks in the use of cannabis in mental health**

It is important to point out that the use of cannabis is not innocuous, it does in fact imply certain risks, as with all psychoactive substances. Nonetheless, the risks involved for each person can be estimated and evaluated, even though a certain margin of uncertainty will always remain, as with all things in life.

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<sup>21</sup> Blaas, K. (2008). Treating depression with cannabinoids, 3(2), 8-10. Available online at: [http://www.cannabis-med.org/data/pdf/en\\_2008\\_02\\_2.pdf](http://www.cannabis-med.org/data/pdf/en_2008_02_2.pdf)

<sup>22</sup> Müller-Vahl, K. (2008). Cannabinoids and schizophrenia: where is the link?, 3(4), 11-15. Available online at: [http://www.cannabis-med.org/data/pdf/en\\_2008\\_04\\_1.pdf](http://www.cannabis-med.org/data/pdf/en_2008_04_1.pdf)

<sup>23</sup> On the studies associated with cannabis' therapeutic properties on physical disorders, it is worth reviewing Cannabis International Foundation's research on fresh and raw plants. Their findings indicate that it is in these states that the therapeutic benefits of THC and CBD acids (THCA and CBDA) can be taken advantage of, since by drying or overheating the plant it loses them –and their properties– since they are transformed. This information is extremely interesting to those medicinal users who wish to make use of these properties without getting *high*, as when the plant is fresh and raw it is not psychoactive. For more information revise *Cannabis International Foundation: A resource for the dietary and medicinal study and use of cannabis*. Available online at: <http://www.cannabisinternational.org/>

What is important to know about the risks is that so far it is known that they occur in the field of mental health, and not physical health. On this, some scientific research accounts for certain risks related to THC, in so far as this is the chemical component that could generate states of anxiety due to its psychoactivity.

On this issue, there have been cases involving certain people or situations where the use of cannabis seems to have generated these states, generally perceived as one of THC's acute effects, that is to say, while feeling its psychoactive effects. There have also been cases in which these states of anxiety have continued beyond the reach of these acute effects.

In a similar vein, it is thought that THC could provoke psychotic states, be it during its acute effects or more permanently. This could be explained due to this substance, like any other, triggering a certain predisposition found in anyone to develop psychotic episodes.

Even though there are very few such cases, it is crucial to emphasise that when an anxiety or psychotic state is activated, be it temporary or permanent, it must be clear that this is not due to a quality inherent to the drugs in question, as though they themselves were able to produce these states. What occurs in these situations is that these substances work as triggers, just as any other event in the life of a person could. In other words, the origin of a psychosis is to be found in several areas, and it is not possible to explain its origin just in terms of the use of a drug. If this were actually the case, in order to avoid an episode one would simply have to avoid certain substances. In conjunction with this, it is also understood that not everyone presenting this condition necessarily used a psychoactive substance beforehand.

It is therefore clear that the possibility of triggering any of these states is due to a large extent to the user's characteristics and not just to the THC consumed. In other words, this does not correspond to an inherent effect of the substance, but rather to a series of factors linked to personality, consumption context, the drug's purity, dosage, the experience's expectations, the information the user has of its effects, amongst others.

It is also worth mentioning that in most cases featuring a psychotic episode secondary to drug use, these symptoms disappear when the person stops taking them. For this reason categorical diagnoses are not recommended in mental health when a person is taking psychoactive substances of any kind -including prescription drugs- since many of the manifested symptoms will disappear when they stop consuming.

Another risk brought on by the acute effects of THC, corresponds to a loss in short-term and working memory. This setback corresponds to a transitory state that does not seem to imply permanent damage of any kind. On this subject a longitudinal case study was carried out with people who exclusively used cannabis, and those who consumed at least five times a week for several years did not present any cognitive damage after three months of abstinence.<sup>24</sup>

Furthermore, given that other research has already shown that cannabinoids promote neurogenesis and are neuroprotective,<sup>25</sup> it is

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<sup>24</sup> Mechoulam, R., & Parker, L. A. (2013). The Endocannabinoid System and the Brain. *Annual Review of Psychology*, 64(1), 21-47. doi:10.1146/annurev-psych-113011-143739.

<sup>25</sup> This means that they operate as important agents in controlling, preventing and treating alterations in the central nervous system.

understandable that several studies should indicate that its use does not result in neuronal damage.

#### **IV.- Risk reduction practices in mental health for cannabis use**

Considering the mental health risks that the use of this plant can imply, knowing how to deal with them is indispensable. Therefore, people who self-medicate or those wishing to do so can choose whether or not to consider the various aspects of the information available on risk management. The choice regarding risk reduction involved in any psychoactive drug, must be made available to any person who wishes or has to use a drug, whether prescribed by a doctor or psychiatrist, or self-medicated. This information should be made available to the public, even to the extent of it being a part of drug policy.

In the case of cannabis use, the fact that there are different varieties of the plant and that each contains different types and quantities of components should be taken into consideration. The presence and quantity of components varies according to the plant's cultivation conditions; therefore using two plants from the same variety but that were grown under different circumstances does not guarantee that they will offer the same components.<sup>26</sup> This means that a certain presence and quantity of components will allow for certain effects on a user's health, while others will not. For this reason, analysing<sup>27</sup> cannabis samples has proven to be fundamental.

Within the identified components, two stand out for their quantity and for the interest aroused in science: THC and CBD exhibit high percentage levels and interact in several ways according to their presence in the plant.

Regarding this point, it has been seen that higher counts of THC can provoke states of anxiety, depression or psychosis, whether temporary or permanent, so this factor must not be overlooked. Accordingly, higher amounts of THC will interfere more with short-term memory, as opposed to lower quantities of THC or quantities modulated by high counts of CBD.

CBD can in fact modulate the activity of THC,<sup>28</sup> and in so doing attenuate its psychoactive and other effects mentioned above. In order to understand the modulating effect that CBD exerts over THC, two examples can be cited: the existence of studies stating that a high dose of CBD taken before one of THC with CBD will inhibit THC's effects; and the calculation of a plant's THC:CBD psychoactive ratio.

This THC:CBD ratio indicates the intensity of a plant's psychoactive effect, and is calculated with the following scientific formula:  $(\text{THC} + \text{CBN}) / \text{CBD}$ . That is to

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<sup>26</sup> This means that the information supplied by seed banks on the cannabinoid percentages associated to cannabis seeds is insufficient, since these molecules are not present in the seeds themselves. Also, cannabinoids vary according to a plant's cultivation conditions, so one is not able to predict their percentages in a plant that has not yet grown and has not been analysed.

<sup>27</sup> For more information on analyses, we recommend visiting the Steen Hill website, a California-based cannabis analysis lab (<http://steephilllab.com/>) that lends its services to the USA's greatest medicinal cannabis distributor, Harborside Center (<http://www.harborsidehealthcenter.com/index.html>).

<sup>28</sup> Mechoulam, R., & Parker, L. A. (2013). The Endocannabinoid System and the Brain. *Annual Review of Psychology*, 64(1), 21-47. doi:10.1146/annurev-psych-113011-143739.

say, concentrations of THC and cannabitol (CBN)<sup>29</sup> are added and then divided by the amount of CBD. If the result is less than one, it means there is no psychoactive potential.<sup>30</sup>

This calculation implies that a plant's THC:CBD psychoactive ratio does not correspond exclusively to its amounts of THC and CBN, since the quantity of CBD also affects its potential.

This is not only interesting for recreational users who could select varieties with greater levels of THC and lower levels of CBD, but also for medicinal users whose interest does not lie in getting *high*, but in acquiring the therapeutic benefits. For the latter, the challenge lies in finding varieties with low THC and high CBD counts, that is, if they are after CBD's therapeutic properties, seeing as THC also provides its own positive effects on the user's physical health.<sup>31</sup>

Other aspects to be kept in mind in reducing the risks in mental health associated with consuming cannabis are those related to the consumption context and to the state the user is in. Both aspects are always essential when consuming any psychoactive substance, as they directly affect the desired or undesired effects of any moment within a drug taking episode.

For this reason, a single substance will not always produce the same effects with the same dose taken at different times, as this will be determined by the emotional state the person is in, along with the general setting. This is why it is recommended that when using cannabis, it should be in a safe environment for the user, accompanied by people who will not disturb them in any way.

Similarly, the dosage and mixtures with other substances should be considered when seeking certain effects. This is the reason why in order to regulate the psychoactive effects it is recommended new users take low doses and not mix it with other drugs.

Additionally, in terms of the substance itself it is important to mention the administration route, as the psychoactive effects change according to how it is ingested. In the case of cannabis, inhaling is the easiest to handle, as the psychoactive effects are felt a few minutes after smoking. Contrastingly, ingesting via the digestive tract is more difficult to manage, as the effects appear after approximately 45 minutes of having eaten.

Likewise, the length of the effect varies according to the administration route, so via inhalation usually lasts less than by digestion. The first can trigger effects for a couple of hours, while the second can last for four or five hours, depending on the plant's components and the dose. This must be taken into account when considering cannabis, as it allows one to handle not only the desired effects but also the undesired effects, above all if it is the first time one experiences it.

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<sup>29</sup> Cannabitol (CBN) is a cannabinoid whose psychoactive action is very weak, it is a THC metabolite and a product of the degradation of THC through oxidation.

<sup>30</sup> Hidalgo, E. (2005). Análisis de muestras de cannabis: psicoactividad y adulteración. En *Cannabis* (Colectivo Interzona (Ed) pp. 65-72). Madrid, España: Amargord.

<sup>31</sup> Grotenhermen, F. & Russo, E. (Ed.) (2002). *Cannabis and cannabinoids: pharmacology, toxicology and therapeutic potential*. New York, United States: The Haworth Press.

## **V.- Conclusions**

To carry out a clinical review of some of the problems associated with drug consumption currently seen in mental health establishments in Chile –like COSAM in Colina– brings one up against the problems that our patients have to deal with. This not only allows us to identify the kinds of addictions that afflict some people, but also reveals their severity.

At the same time this reveals the problems that health professionals face, which together with the previous point, makes the case for an urgent need for a planned policy on drugs that deals with these issues. In order to focus on these problems, policies must be adjusted to each social context, given that each one features particular drug use experiences, whether this may tend towards health or towards the risks.

What the discourse of politics, academia and the media tend to emphasise as priorities is questioned by the everyday experiences in health centres such as the one pinpointed here. The quality of life of both drug users as well as the health teams treating these addictions, is affected by the silence that frames certain drug use: on the one hand, the silenced severity of alcohol addiction and cocaine paste; and on the other, the muted attitude towards the medicinal alternatives provided by cannabis.

This last approach also interferes with the intimacy of treatment centres, as in several practices of some specialised addiction teams one notices a deafness towards the self-medicating intentions that frame many users' drug habits. This lack of attention and receptiveness to what guides people's consumption practices are a consequence of the guidelines drawn from policies founded on the desire to put an end to drug use. It would seem that according to these policies, it does not make sense to listen to what it is users are actually trying to do when they consume, nor to consider the possible differences between substance uses, nor understand how it is that some of them are directed at actually improving the user's health and wellbeing.

For this reason, policies that support addiction treatment must consider a user's self-care practices carried out before seeking professional help, and must build on the objectives that a drug user actually wishes to achieve. In this sense, heading towards the eradication of drug use speaks of a lack of understanding of what professional health teams have to work with.

This is the objective that many policies carried out in several countries, where they attempt to eliminate all drug uses, imposing abstinence as the main goal in addiction treatment. This policy considers all drug uses as bearing the same meaning, which amplifies the gap between the drug user and the health team attempting to treat cases of addiction. Even more so, this policy amplifies the gap between the drug user and themselves, in as much as it distances them from becoming aware of what it is that guides their own search for wellbeing.

The fact that in this context some may use cannabis as medication is not to say that this is so in every case. However, this alternative often allows users to improve their quality of life, while at the same time it shows health treatment specialists that people who use drugs are much more in charge of their health than is imagined.

Society must recognise that substance users must have a right to manage their own health, and this must corrode current public drug policy. This ethical

stance is coherent precisely with what these policies must promote: that users be in charge of their own health, wellbeing and quality of life.

In as much as we work in this field, we cannot ask users to come to terms with their lives while curtailing the options they have found to bear results, such as the use of cannabis to regulate several aspects of cocaine paste consumption. Regarding this, we should know that the functions of drug uses are multiple and that they vary according to context and to the various moments in people's lives. This aspect should be essential in elaborating drug policy and having mental health teams put them into practice.

In order to elaborate adequate policies for each context, it seems we should first learn about what it is the very users are trying to teach us. We should remain alert as to the sense of their consumption and towards that which steers their own decisions. This is the only way we will be able to construct policies that are adequate to each place and time, and in a way that makes sense to drug users.

If we preserve their own self-care practices, we will be able to carry out interventions filled with meaning for them, and that would therefore be easier to achieve given that they come from their own daily context.

To visualise and comprehend users' self-care practices must be a tool used to elaborate policies, and should therefore be one of the cornerstones in their planning. So too should the optimisation of self-care practices already in place by people using drugs, being that encouraging that which already exists is sustainable and worthwhile in time, given that it already occurs within a meaningful context.

For these reasons, the silence of the severity that besets people who use drugs, as well as their own practices for recovering their health, cannot be left stillborn in users' accounts heard in health centres. This is why we should ask ourselves, what is it that is actually happening there?

To be precise, we should ask ourselves why cocaine paste and alcohol are not a priority in political, academic and mass media discourse, in light of the fact that their consequences for health are much more severe than those of cannabis.

Moreover, we should reflect on the use of cannabis as medication against symptoms of anxiety, depression and psychosis in some people. Specifically, we should question the dosage used as stipulated by each one's therapeutic needs, just as present psychiatry does with its classic medication.

Regarding this issue it would be interesting for our policies to consider elaborating individual treatment plans that take into account the phenomenology of each person's symptoms, in order to then be able to apply different varieties of cannabis via different administration routes according to the components needed by each subject. Following suit, the most adequate moments for consuming cannabis can be planned out according to the characteristics of each individual's symptoms, just as cocaine paste users regulate their withdrawal symptoms by choosing when to smoke cannabis.

This approach does not mean that cannabis should be used by everyone suffering from one or more of the problems mentioned here, as this would imply defending this plant blindly. Going ahead with this type of action would not help to plan ways of incorporating cannabis' possible benefits in a more discerning manner, tailored to each person's health needs. Therefore, before using cannabis previous evaluations should take place to determine whether or not to employ it, as the case may be, just as the various possible pharmacological treatments are

evaluated in a unique and localised manner when addressing some form of disorder.

It is also important to bear in mind that the scientific data presented here on cannabis is based on research that used natural varieties and not adulterated ones, something that is not always available on the illegal markets that provide the population with drugs. For this reason, it becomes relevant to incorporate into public policy methods of substance analysis, allowing those of us who work in the field of health to actually know what each user is consuming, in order to inform them of the real risks and harm associated to its use.

Similarly, these analysis systems should be implemented for cocaine paste, and for any other substance that comes from the illegal market. In so doing, users could then decide whether or not they want to continue consuming a given substance, making a decision as of verified information directly related to their drug use.

It should be clear that for those of us who work in mental health, it is not possible for us to continue planning treatment programmes if we do not know what substances we are dealing with; just as we are not able to inform our patients of the effects, risks and harm involved with their substances if we really do not know what components are actually found in the drugs they use.

In brief, what we need is not only scientific thoroughness in the study of these drugs, but we also need more access to this kind of information, since those of us who work with substance users have not received any kind of training from the government or universities in order to prepare us on the issues detailed here. This shortage not only makes our job more difficult but also renders what actually happens with our users invisible, since it doesn't allow us to objectively observe their consumption and the meanings related to their health, which are part of their daily habits.

It is for this reason that when elaborating policies, it has become imperative to reflect on the ethics related to the health issues we dealing with, and to ask ourselves whether we ought to include the therapeutic use of substances such as cannabis. In the same way, we should ask ourselves whether we respect our users' health-rights in our professional activities, especially if they decide to carry out their own concrete self-medicating actions, as is the case with cannabis mentioned here.

Are we able to observe this practices during our working day? Do we allow our users to sustain their own health? Or do we impose the health practices that best suit our morals?

It is only after reflecting on these issues that we will be able to start the process of planning and carrying out treatments and policies that are truly adequate for our population's needs, and not just for our own personal interests.

*Santiago de Chile, July 2014.*

Translated from Spanish by Sam Nacht.