

## DRUG USE IMPACT IN DRUG ADDICTS' PHYSICAL AND MENTAL HEALTH

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### ABSTRACT

This is a qualitative study of exploratory method, developed in 2012 and 2013, in a rehab unity to drug addicts, Paraná, Curitiba, Brazil. Its aim is verify the drug use impact in addicts' physical and mental health. Twenty drug addicts in treatment were interviewed. Data collected by through of semi-structured interviews and processed using the categorical thematic analysis. The results showed impacts on physical medical condition related to drug poisoning, the state of abstinence, changes on feed, sleep, rest, hygiene and personal appearance. Regarding the impact of substance abuse in mental health, the results indicated the presence of psychiatric comorbidities as schizophrenia and bipolar affective disorder, thought changes, perception, memory and cognition, also behavioral changes. As conclusion, drugs are responsible for huge impacts in addicts' physical and mental health considering the harmful consequences in the physical conditions, self-care, thought, cognition and in the behavior.

**Keywords:** Nursing. Mental health. Substance-related disorders.

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### INTRODUCTION

Chemical dependency represents a serious public health problem, given the implications that the use, abuse and drug addiction generate to the person and society. A 2010 data report presented by the United Nations shows that approximately 230 million people - 5% of the adult population in the world - used illicit drugs at least once that year. This report pointed out that 27 million people - 0.6% of the world's population - are dependent on drugs and, on average, one in every 100 deaths of the adult world population is attributed to the consumption of illicit drugs<sup>(1)</sup>.

The impact of drug use for the whole of society is incalculable in all countries, as it covers the possibility of comorbidities, increased early mortality, increased violence and crime, traffic and work accidents, absenteeism, emotional disorders, family and social conflicts<sup>(2,3)</sup>.

Furthermore, drug use has been associated with changes of conduct, criminality and antisocial practices related to irresponsible behavior that the individual takes over as a result of chemical dependency. Thus these individuals end up getting involved in trouble, sometimes, of judicial order, which generates individual and social losses, and social exclusion<sup>(2,3)</sup>.

Chemical dependency is characterized as a heterogeneous mental disorder that afflicts individuals in various ways, for various reasons, motivations and circumstances, generating relevant health impacts on chemical dependent<sup>(1-3)</sup>. Scientific evidence indicate that the exacerbated consumption of drugs and damage caused - directly or indirectly - by chemical dependency foment the development of numerous physical and mental problems<sup>(4)</sup>.

On physical health, the use of injected drugs, such as cocaine and opioids, can cause infectious and inflammatory diseases, local or disseminated, and it is associated with infection by the human immunodeficiency virus (HIV)

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and hepatitis through needle sharing. The use of alcohol causes damage primarily to the liver, pancreas and stomach; acute intoxication by cocaine can cause acute myocardial infarction and strokes; and marijuana, after its prolonged use, can lead to "amotivational syndrome", showing significant difficulty in performing tasks<sup>(2,5)</sup>.

In relation to mental health, it is estimated that 50% of people with drug-related disorders also have another diagnosis of mental illness, including schizophrenia, schizoaffective disorder and bipolar affective disorder<sup>(2)</sup>. This fact represents a challenge for professionals in the healthcare area, because the traditional methods of treatment for mental disorders and substance abuse usually result in little success<sup>(6)</sup>.

In this regard, it is noted that, in the treatment of drug addiction, healthcare professionals should develop skills and abilities to assess and detect the physical and mental damage that people have as a result of drug use in order to minimize the context of worsening of clinical symptoms and relapse rates, and increase adherence to treatment, justifying the importance of studies that address the impact of drug use on physical and mental health of these individuals, their families and the society. Thus, this research aims to verify the impact of drug use on physical and mental health of chemical dependents.

## METHODOLOGY

An exploratory qualitative research, conducted during the period from August 2012 to December 2013, in a Rehabilitation Unit which serves male drug addicts, aged 18 years or more, in the Paraná State.

A semi-structured interview was applied and recorded with this open question: "*Tell me about the aspects that you consider as a result of drug use on your health*". During the period of data collection there were 30 addicts in treatment in the Unit, who were not in detox period. For theoretical sampling, we sought to collect data to support the theory so that, when collecting, transcribing, and analyzing them, we could reach the data theoretical saturation which was hit with 20 interviews.

The information analysis obtained through the interviews was done using the categorical

thematic analysis technique, which is operationally organized in three phases: pre-analysis, material exploration and processing of results and interpretation<sup>(7)</sup>. Thus, the interviews were transcribed in full; later, data were systematized in order to keep the basic content of thought and the meaning of the message presented by chemical dependent.

The themes that emerged from the systematization of transcribed reports were grouped into context units, forming thematic categories. The results of the interviews, confronted with the literature, are presented in two thematic categories and three subcategories.

This study is part of the "Hospital readmission of addicts in a Rehabilitation Unit: causes and motivations of relapse" project, approved by the Ethics Research Committee of the Health Sciences Sector (UFPR), under the 904.029.10.03 registry. It should be noted that the ethical precepts were safeguarded, in accordance with 466/2012 Resolution of the National Health Council. To this end, the participants of the survey were described by the letter "P", plus a numeral with no correlation to the ordering of the interviews.

## RESULTS AND DISCUSSION

Participants were ranged between 21 and 66 years old, and 12 of them are between 20 to 40 years old. It was found that 17 among them began using the drug between 10 and 19 years old. We also observed that the legal drug most commonly used was alcohol (20), followed by tobacco (18); and illicit drugs were crack (11) and cocaine (8). It is noteworthy that all participants made use of more than one psychoactive substance.

### IMPACT OF DRUG USE ON THE PHYSICAL HEALTH OF THE ADDICT

A variety of changes in the physical condition was assigned by participants as a consequence of intoxication with one or more drugs or withdrawal state. Of these conditions, some were temporary and others become permanent. Examples of reported diseases: lower limb paralysis, tremors in the hands, convulsions, fainting, hemoptysis, nausea, vomiting, liver

problems, varicose veins in the lower limbs and gastric ulcers.

At the time I mixed cachaça, three crack rocks and cigarettes, my right leg paralyzed. [...] The drug affects my health, because I started to have hand tremors. (P.1)

Once I spent a whole night smoking crack and in the morning I spit blood. (P.3)

My problem is my liver that is very weak. The results of my blood test showed that I am at a high gamma - GT. (P.13)

I was a sportsman and alcohol aggravated my physical condition. When I was thirty years old I couldn't play soccer because I had no breath. [...] I got varicose veins because of alcohol. [...] I also had early gastric ulcer. (P.14)

I started drinking a lot and I went into convulsions twice. (P.20)

Considering their physical conditions, the participants' reports are in line with the literature by pointing the appearance of significant clinical symptoms as a result of poisoning by the use of drugs. The acute intoxication is considered a medical emergency, since it commonly requires hospitalization by the effect that the substance causes in the organism from pathophysiological changes related to the consumption of such drugs<sup>(8)</sup>.

A research developed with hospitalized patients due to poisoning by substances of abuse showed that the use of alcohol prevailed in 77% of hospitalizations. And that liver cirrhosis of alcoholic origin, aspiration pneumonia, kidney failure and gastrointestinal bleeding - the most common clinical comorbidities in this population - cause permanent physical consequences to the individual<sup>(8)</sup>.

In addition to these complications, often drug addicts have gradually become tolerant to poisoning caused by drugs and show withdrawal symptoms when the substance levels in the body decrease<sup>(8)</sup>. Corroborating the narratives of the participants of this survey, other studies indicate that, among the physical damage concerning the withdrawal syndrome, there are symptoms of headache, tremors, convulsion, anorexia, nausea and vomiting<sup>(2,9)</sup>.

From the perspective of the participants, drug use causes changes in food quality as the frequency and amount of it, causing impacts on

health, as weight loss and weakness on physical condition:

I was 14 days without eating, just drinking. [...] My ex-wife took me to the hospital because I could not eat, I lost weight and I was very weak. (P.9)

I used to eat well and at the correct times, but as time went by I ate less. I knew this was caused by alcohol because I used to research the consequences of consuming alcohol, but my desire to drink was much higher. (P.14)

I've been four days without feeding myself. [...] in other episodes, I spent two days without eating, only drinking water. (P.18)

Confirming this perspective, a research developed in the city of São Paulo with 30 *crack dependents* pointed out that the most prevalent organic problems of addiction are the lack of appetite and intense weight loss<sup>(10)</sup>. Among the factors contributing to the decrease in body weight, there are reduced appetite generated by crack effects in the body, psychomotor agitation and even walking long journeys in search of the substance during chemical craving period<sup>(2,10)</sup>.

Regarding the chronic use of alcohol, it is considered as a source of energy and, depending on the dose consumed, it can be equivalent to half the daily calories required for the individual, which favors the replacement of food intake as a nutritional and energy source, proceeding in reduction of body weight and malnutrition<sup>(11)</sup>.

A study<sup>(12)</sup> performed with addicts admitted to a General Hospital of Santa Maria (RS) showed that about 95.4% of the patients had changed eating habits through the use of drugs; and, of these, 45.4% acknowledged that, under the effect of the drug, they did not ingest foods during the day. Still, in this study, the analysis of biochemical tests showed changes in nutritional status by poor appetite and potential hepatotoxic damage<sup>(12)</sup>.

Participants reported that one of the physical consequences of drug use is related to changes in the patterns of sleep and rest:

It affects health, because I can no longer sleep properly. (P.3)

When I have relapse, I have drunk for 24 hours until a moment when I could not sleep anymore. (P.5)

When I was on drugs, I didn't go home. I slept where it was possible to. Sometimes, I have not slept. (P.17)

I slept during the day and went out at night. The sunlight hurt me, [...] I felt something strange. So, it hurt my health. [...] Sometimes I vomited when I went to get the drug. (P.11)

It is believed that the poor quality of sleep - mainly related to episodes of insomnia - is associated with excitatory effect that some drugs cause to the central nervous system, as well as by the intense desire to use drugs, which fosters continuous search for the substances<sup>(10)</sup>.

International evidence indicate that, possibly, the psychoactive substances act directly in the circadian cycle - rhythm of cyclical biological activities of approximately 24 hours - and cause sleep disorders. It is estimated that the difficulty of sleep seems to be a risk factor for drug abuse and relapse<sup>(13)</sup>.

When using drugs, participants pointed out oversights related to physical hygiene, bathing, brushing teeth and personal appearance, as their haircut, change of clothing:

When I got here, it was a month that I haven't brushed my teeth and had my haircut. (P.13)

I was 62 days without bathing and without taking off my shoes. (P.14)

My hygiene was precarious. I showered only when I was able to, when I went to visit my mother or a friend. That's because I did not go home when I was on drugs, to avoid more trouble. (P.17)

It is known that the action of using drugs occupies the central role in the lives of drug addicts at the expense of other activities such as self-care, mainly related to the personal and oral hygiene. A study of drug users participating in a "therapeutic group of healthcare education in promoting self-care" showed that personal care are commonly affected, since the judgment and criticism of these individuals are modified. Therefore, they do not identify their actual needs and problems<sup>(14)</sup>.

A study carried out in a drug treatment center in Iran showed that 48% of respondents claim they did not brush their teeth daily; and 81% of them rarely or never had oral hygiene with dental floss<sup>(15)</sup>. Among the dental problems

arising from the use of drugs, it is possible to cite the oral diseases such as dental caries and periodontal diseases of rapid evolution<sup>(2,15)</sup>.

It is noted that the narratives of the study participants - about the impact of drug use in the clinical condition of the addict - converge with results in national and international studies<sup>(9,16)</sup>. This convergence can be seen from a study carried out with alcoholics in treatment at a service in a municipality of São Paulo State, which showed that, among the major physical damage of addiction, there are the liver problems, problems the withdrawal syndrome, sleep loss and gastrointestinal disorders<sup>(9)</sup>.

## IMPACT OF DRUG USE ON THE MENTAL HEALTH OF THE ADDICT

### Psychiatric Comorbidity

Mental disorders - such as schizophrenia, bipolar affective disorder and depression - were cited by participants as acquired due to the use of drugs, having as an aggravating cause the suicide attempt:

I got sick due to drug use. I used medicine to reduce cravings and mixed them with drugs. [...] I started to have a diagnosis of schizophrenia. [...] I do follow up with psychiatrist, in basic health unit, once a month. (P.1)

I went into depression when I was hospitalized for treatment of alcoholism. In 15 days of hospitalization, my mother passed away and I was having problems at home, I was getting divorced. It was a very difficult time for me. [...] I was depressed and I tried to kill myself. (P.7)

Sometimes I feel sad and I like to be alone. I go out and I can't stop anywhere. If I am drinking in a place, and I want to go to another one, then I go. During the day, I keep switching bars. [...] I have many depressive episodes. I feel sorrow and agony, nothing is good. People talk to me and I don't mind. (P.12)

I was diagnosed with bipolar disorder. The psychiatrist evaluated me during 60 days. (P.14)

The co-occurrence of substance abuse with other mental disorders has increased in recent years. It is pointed out as the main cause of this fact, the increased availability of these substances for society as a whole. That's because scientific evidence shows that drug

addicts are more likely to develop a mental disorder when compared to non-users of drugs<sup>(2,6,17)</sup>.

A study developed in the United States of America, whose goal was to examine the prevalence and trends of psychiatric comorbidity among drug addicts in treatment, noted the occurrence of mental disorders associated with: 64.6% dependent on benzodiazepines; 52.4% opiates; 49.8% heroin; 44.1% alcohol; and 39% marijuana<sup>(17)</sup>.

Among the most prevalent psychiatric comorbidities among drug users, there are: schizophrenia, bipolar disorder, depression, anxiety disorders and personality<sup>(2)</sup>. In people with more severe and chronic mental disorders, drug use, even in small doses and occasionally, can cause more harmful consequences, compared with people who do not have these disorders<sup>(2,6)</sup>.

Considering this issue, we highlight the importance of considering the presence of psychiatric comorbidity in drug treatment, since psychiatric symptoms difficult the treatment and are associated with higher rates of relapse and aggression<sup>(2,6)</sup>. The literature shows that, to deal with the increasing complexity of providing effective treatment to this clientele, combinations of psychotherapies, behavioral interventions and pharmacologic strategies are needed, to consider the type of psychoactive substance and severity of comorbidity<sup>(2,6,17)</sup>.

### **Changes of thought, cognition and memory**

The impact in thought and felt sense was reported by four participants who demonstrate such changes through belief and visualization of unreal and persecution situations:

[...] I cannot sleep right. I think anyone can enter at any time. These paranoias that happen because of drugs. Sometimes I think that there is someone stalking me. [...] I think someone is going to kill me and I need to kill that person before, but there is no one. It's all in my imagination. (P.11)

Sometimes, I thought I was seeing things, but actually I wasn't seen anything. I got very confused. One day, I wrapped the blanket like there was a baby inside, I saw men coming up and making noise. And I said: 'Silence. Look at the sleeping child, a newborn'. But there was no baby and no men. (P.14)

I kept thinking that there was an animal there, that the world was against me, my mother was cheating on me and my parents were doing something to hurt me, or something like this. (P.15)

When I consumed drugs, I had hallucinations. [...] Some visions, things that came into my head and that didn't exist. (P.17)

These changes of sensory perception and thought, characterized by psychotic symptoms from paranoid delusions and hallucinations are often associated with acute intoxication or withdrawal syndrome of some drugs, and it may cease spontaneously after a few hours or turn into a pathological condition<sup>(2)</sup>. It should be noted that extreme cases of psychotic manifestations induced by drugs may result in situations of risk of aggression<sup>(2, 10, 18)</sup>.

Among the psychoactive substances, cocaine is the most likely to develop psychotic and hallucinatory symptoms; it is, therefore, a substance classified as a stimulant of the central nervous system. Studies indicate that chronic use of cocaine incites paranoia situations that cause distortions of reality associated with hallucinations and often persecutory delusions, encouraging a continuous threat perception<sup>(2,10,18)</sup>.

The participants said that drug abuse causes memory changes, because often they forget their commitments, even when reminded by others. It is understood, in the P.7 reporting, that under the effect of drugs, the person forgets simple everyday things, like the address where he/she lives:

Lately, I was drinking enough and my memory failed. I could do anything, but the other day, I couldn't remember what I had done. Sometimes, I walked around the whole neighborhood to find my house, and that took time. Sometimes, people I know saw me and took me home. (P.7)

[...] often, when I'm drunk, I set up an appointment with someone and, after a few days, the person asks me about what we agreed, but I do not remember. (P.12)

As a result of drug use, most addicts have episodic memory impairment. It is believed that with priority action in the central nervous system, these substances cause probable cognitive deficiencies or syndrome associated

with dementias, characterized by memory loss without changing the level of consciousness<sup>(2)</sup>.

Corroborating this finding, an international survey to evaluate memory functions from an opioid-dependent group and a control group found that users of this substance suffer from generalized memory *deficits* when compared to the control group, which can cause significant implications for the development of daily activities<sup>(19)</sup>.

### Behavior changes

Some participants explicitly stated behavioral changes resulting from drug use, aggravating even further the situation they are in; therefore, when feeling angry and irritable, they become aggressive and likely to commit violent acts against others:

Depending on the drug that I was using, I had a different behavior. [...] With crack and cocaine, I got angry, aggressive, brave and not afraid of anything. (P.17)

Crack made me nervous and aggressive. If someone came to talk to me, [...] I behave badly, [...] because I was nervous and angry, and I wanted to be alone. Marijuana also makes me so, but the crack is more pronounced. (P.18)

When I used cocaine, I was a little scared. It takes away the fear of the people and becomes easy to kill. The person gets dangerous. (P. 20)

Due to the use of drugs, the participants changed their behaviors, therefore, suffered and practiced physical violence; they were victims of car accidents; more than once, they were involved in physical fights; they suffered injuries by firearms and other weapons; they were hit; and, consequently, they were treated in emergency services:

Once, I was armed with a 6.35 caliber pistol. I was abstinent, fetching drugs. I decided to play with the gun and it accidentally fired and the shot hit my finger. Hit the bone and it fractured, but I didn't lose the finger. (P.1)

Two moments marked my life. First, I was drugged and a man messed with my wife. We had a fight. [...] Just I remember waking up in the hospital with my face reconstructed by platinum and plaster on my nose. Secondly, I owed ten Reais to the drug dealer [...] so I took two blows

on my head. I managed to escape, but there were prominent marks on my head. (P.3)

In another occasion, a man touched my wife's hair and I didn't like it. We started the fight, but I didn't see that he had a knife. [...] I took a stab in the right chest, two in the back and arm. I had external bleeding. (P.20)

Among mental health problems, the participants reported behavior changes as a result of the anger and aggressiveness. This perspective is shown in a study conducted in Porto Alegre (RS), which compared a group of cocaine-dependent and a group of alcohol-dependent men with a non-dependent control group, which pointed out that the drug addicts have a higher anger trace, temperament, reaction and expression when compared to non-users of drugs<sup>(20)</sup>.

With priority action in the central nervous system, drugs often exacerbate violent behavior, which possibly relates to the increased activity of the anterior and frontal cingulate cortex. With chronic use of these substances, there is a reduction of pleasure with phases of euphoria ever smaller, associated with dysphoric phase with symptoms of irritability and anger, providing a manifestation of violent behavior<sup>(2,20)</sup>. In this way, it encourages aggression situations, accidents and suicides, these being the main causes of mortality among drug addicts<sup>(2,3,20)</sup>.

### FINAL CONSIDERATIONS

We identified impacts of physical and mental nature and social relations of drug addicts. It was noted, therefore, that these people are exposed to various risk situations and social vulnerability. Such situations indicate serious public health problem.

It was also possible to verify the impacts on physical health by drug use: liver and gastrointestinal problems, fainting, seizures, weight loss and malnutrition, changes in sleep patterns and neglect of personal hygiene.

Among the damages related to mental health, we found: psychiatric comorbidity; changes of thought, related to delusions and hallucinations; transient situations amnesia, among others. It is necessary to point out that these are factors of

major impact and relevance in the health of drug users.

Furthermore, some participants presented emotional and behavioral changes related to episodes of anger and irritability that have carried out violent acts, in which they have suffered and practiced physical violence, being

victims of car accidents and involved in fights, injuries by firearm, weapon, and roadkill.

The results of this study suggest the importance of the subject knowledge by health professionals - especially nursing - to identify issues that may assist in the organization and delivery of care with preventive actions and rehabilitation of people affected by addiction.

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## IMPACTO DAS DROGAS NA SAÚDE FÍSICA E MENTAL DE DEPENDENTES QUÍMICOS

### RESUMO

Pesquisa qualitativa e exploratória - desenvolvida em 2012 e 2013 - em uma unidade de reabilitação para dependentes químicos no Paraná, com objetivo de verificar o impacto do uso de drogas na saúde física e mental do dependente químico. Foram entrevistados vinte dependentes químicos em tratamento. Os dados foram coletados mediante entrevista semiestruturada e tratados com a técnica de análise categorial temática. Os resultados demonstraram impactos na condição física do dependente químico relacionados à intoxicação por drogas, estado de abstinência, alterações de alimentação, sono, higiene e aparência pessoal. Em relação ao impacto das drogas na saúde mental, os resultados apontaram a presença de comorbidades psiquiátricas, como: esquizofrenia e transtorno afetivo bipolar, bem como alterações de pensamento, percepção, memória, cognição e comportamento. Conclui-se que as drogas ocasionam graves impactos na saúde física e mental dos dependentes químicos a partir de consequências nocivas na condição física, no autocuidado, no pensamento, na cognição e no comportamento.

**Palavras-chave:** Enfermagem. Saúde mental. Transtornos relacionados ao uso de substâncias.

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## IMPACTO DE LAS DROGAS EN LA SALUD FÍSICA Y MENTAL DE DEPENDIENTES QUÍMICOS

### RESUMEN

Investigación cualitativa y exploratoria, desarrollada en 2012 y 2013, en una unidad de rehabilitación para dependientes químicos en Paraná, con el objetivo de verificar el impacto del uso de drogas en la salud física y mental del dependiente químico. Fueron entrevistados veinte dependientes químicos en tratamiento. Los datos fueron recolectados a través de entrevista semiestructurada y tratados con la técnica de análisis categorial temático. Los resultados demostraron impactos en la condición física del dependiente químico relacionados a intoxicación de drogas, estado de abstinencia, alteraciones de alimentación, sueño, higiene y apariencia personal. Con relación al impacto del abuso de sustancias en la salud mental, los resultados señalaron la presencia de comorbilidades psiquiátricas, tales como esquizofrenia y trastorno afectivo bipolar, alteraciones de pensamiento, percepción, memoria, cognición y comportamiento. Se concluye que las drogas causan impactos serios en la salud física y mental de los dependientes químicos con consecuencias dañosas en la condición física, el autocuidado, el pensamiento, la cognición y el comportamiento.

**Palabras clave:** Enfermería. Salud mental. Trastornos relacionados al uso de sustancias.

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