Chemical dependence among healthcare professionals: an integrative review

RESUMO | Objetivo: caracterizar a dependência química entre profissionais da saúde. Método: revisão integrativa realizada na plataforma BVS, utilizando-se as bases de dados LILACS e BDENF com os descritores “dependência química” AND “profissionais da saúde” AND “transtornos relacionados ao uso de substâncias”. Foram selecionados 06 artigos em português, inglês e espanhol publicados nos últimos cinco anos (2017 a 2021). Resultados: A amostra deste estudo foi composta por 06 publicações. Existe um consumo elevado de substâncias licitadas e/ou ilícitas entre os profissionais da saúde, trazendo consequências agravantes tanto no que tange sua atuação profissional, como no que se refere à dinâmica das relações interpessoais, principalmente com danos à sua vida particular. Conclusão: os profissionais da saúde têm dificuldades em procurar os serviços de saúde para tratamento da dependência química por medo de estigma.

Descritores: Dependência química; Profissionais da saúde; Transtornos relacionados ao uso de substâncias.

ABSTRACT | Objective: to characterize chemical dependence among health professionals. Method: integrative review carried out on the BVS platform, using the LILACS and BDENF databases with the descriptors “chemical dependence” AND “health professionals” AND “disorders related to substance use”. Six articles in Portuguese, English and Spanish published in the last five years (2017 to 2021) were selected. Results: The sample of this study consisted of 06 publications. There is a high consumption of legal and/or illegal substances among health professionals, bringing aggravating consequences both in terms of their professional performance and in terms of the dynamics of interpersonal relationships, especially with damage to their private life. Conclusion: health professionals find it difficult to seek health services for treatment of chemical dependence for fear of stigma.

Keywords: Chemical dependence. Health professionals. Substance-related disorders.

RESUMEN | Objetivo: caracterizar la dependencia química entre los profesionales de la salud. Método: revisión integradora realizada en la plataforma de la BVS, utilizando las bases de datos LILACS y BDENF con los descritores “dependencia química” Y “profesionales de la salud” Y “trastornos relacionados con el uso de sustancias”. Se seleccionaron seis artículos en portugués, inglés y español publicados en los últimos cinco años (2017 a 2021). Resultados: la muestra de este estudio estuvo constituida por 06 publicaciones. Existe un elevado consumo de sustancias licitadas y/o ilícitas entre los profesionales de la salud, trayendo consecuencias agravantes tanto en su desempeño profesional como en la dinámica de las relaciones interpersonales, especialmente con daños a su vida privada. Conclusión: a los profesionales de la salud les resulta difícil buscar servicios de salud para el tratamiento de la dependencia química por temor al estigma.

Palabras claves: Dependencia Química. Personal de Salud. Trastornos Relacionados con Sustancias.

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INTRODUCTION

The American Psychiatric Association’s Diagnostic and Statistical Manual (DSM-IV-TR), published in 1994, defines dependence as a maladaptive pattern of substance use, leading to clinically significant impairment or distress, characterized by the presence of three or more of the following criteria, for a period of one year: (a) tolerance (need for larger amounts to obtain the same effect or lesser intensity of the effect with the usual dose); (b) withdrawal syndrome with typical signs and symptoms of each substance, which are relieved by consumption; (c) consumption for a longer period and in larger quantities than planned; (d) persistent desire to use and inability to control it; (e) a lot of time spent on activities to obtain the substance; (f) reduction of social circle due to substance use; (g) persistence of substance use despite clinical impairments (DSM-IV-TR, 1994).

From the publication of the Diagnostic and Statistical Manual of the American Psychiatric Association (DSM-V-TR) in 2014, the division made by the DSM-IV-TR between the diagnoses of “Abuse” and “Substance Dependence” was removed, grouping them together as Substance Use Disorder. Substance Use Disorder added the old criteria for abuse and dependence, keeping them with minimal changes.

The DSM-5 requires two or more criteria for the diagnosis of Substance Use Disorder, and the severity of the...
condition is now classified according to the number of criteria met; two or three criteria indicate a mild disorder, four or five indicate a moderate disorder and six or more criteria indicate a severe disorder (DSM-V-TR, 2014).

Low control over substance use is the first group of criteria (1 – 4), which covers: criterion 1: consumption of the substance in larger amounts or over a longer period than originally intended; Criterion 2: The individual may express a persistent desire to reduce or regulate substance use and may report multiple unsuccessful efforts to decrease or discontinue use; criterion 3: the individual may spend a lot of time obtaining the substance, using it, or recovering from its effects; criterion 4: virtually all of the individual’s daily activities revolve around the substance (DSM-V-TR, 2014).

Craving manifests as an intense desire and/or need to use the drug, which can occur at any time, but is more likely when in an environment where the drug was obtained or used previously (DSM-V-TR, 2014).

Social impairment is the second group of criteria (5–7): criterion 5: recurrent substance use can result in failure to fulfill major obligations at work, school or home; criterion 6: the individual can continue to use the substance despite having persistent or recurrent social or interpersonal problems caused or exacerbated by its effects; Criterion 7: Important activities of a social, professional or recreational nature may be abandoned or reduced due to substance use. The individual may withdraw from family activities or hobbies in order to use the substance (DSM-V-TR, 2014).

Risky substance use is the third group of criteria (8 and 9): criterion 8: can take the form of recurrent substance use in situations that involve risk to physical integrity; Criterion 9: The individual may continue to use despite being aware that they have a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance. The key issue in assessing this criterion is not the existence of the problem, but the individual’s failure to abstain from substance use despite the difficulty it is causing (DSM-V-TR, 2014).

The pharmacological criteria correspond to the final group (10 and 11): criterion 10: tolerance is signaled when a markedly higher dose of the substance is required to obtain the desired effect or when a markedly reduced effect is obtained after consumption of the usual dose; Criterion 11: Withdrawal is a syndrome that occurs when blood or tissue concentrations of a substance decrease in an individual who has sustained prolonged heavy use. After developing withdrawal symptoms, the individual tends to consume the substance to relieve them (DSM-V-TR, 2014).

Chemical dependence is classified as a psychiatric disorder, thus, it is a chronic disease that can be treated and controlled simultaneously both as a disease and as a social problem (JUNQUEIRA et al, 2018). According to the WHO, about 10% of urban populations around the world abuse psychoactive substances regardless of age, sex, education level and purchasing power (MINISTRY OF HEALTH, 2003).

The most common psychoactive substances can be divided into depressants (alcohol, sedatives/hypnotics, volatile solvents), stimulants (nicotine, cocaine, amphetamines, ecstasy), opioids (morphine, heroin, etc.) and hallucinogens (PCP, LSD, cannabis) (ASTRÈS et al, 2021).

There has been an increase in the prevalence of drug addiction among health professionals, which can be explained by factors such as the great stress in professional practice, long working hours and easy access to medication. Another etiological hypothesis is related to aspects of biochemis-
try and exposure time, suggesting that the high prevalence of abuse in certain specialties, such as anesthesiology, for example, could be related to the inhalation of sedatives daily, during the anesthetic act, generating a phenomenon of drug tolerance, which would develop withdrawal symptoms in the professional after some time and, consequently, dependence and/or abuse (ARRUDA, 2012).

As they are individuals who work directly with the health of others, it is of fundamental importance to know the main signs and symptoms of substance abuse in the work of health professionals. In this context, the following question was defined as the starting point of this study: How is chemical dependence among health professionals characterized?

**METHOD**

This is an integrative review (IR) study that contemplates the analysis of several primary researches on a given subject, in order to define more comprehensive conclusions about a specific phenomenon, based on Cooper’s assumptions (COOPER, 1982) which systematizes in five stages for IR, which are: problem formulation; data collect; data evaluation; analysis and interpretation of data and presentation of results.

To carry out this integrative review, articles in Portuguese, English and Spanish published in the last five years (2017-2022) were analyzed. Data collection performed on the VHL platform by articles published in national and international journals, using the LILACS and BDENF databases with the descriptors chemical dependence; health professionals; substance use disorders. The study had as inclusion criteria national and international articles from nursing and other areas. Original articles from qualitative and quantitative research that addressed the research topic were selected; full articles that contain abstracts indexed in the databases.

As exclusion criteria, articles that required payment of fees, duplicate studies and technical reports were excluded.

The investigation took place through the crossing of Descriptors in Health Sciences (DECS), with the Boolean operator “and”: “chemical dependency (dependência química)” AND “health professionals (profissionais da saúde)” AND “substance use disorders (trans-tornos relacionados ao uso de substâncias)”. The following flowchart shows the drill down (Figure 1).
For data evaluation, initially, 71 articles were included by reading the titles and established terms. Of these, 25 articles were excluded because they were duplicates. After reading titles and abstracts, 40 articles were selected to be read in full. With the critical reading of the texts, 06 were selected to be used in this integrative review.

In order to record the data collected from the articles, a Study Evaluation Form was prepared, filled in after reading the articles, thus enabling the analysis of the information found.

For the analysis and interpretation of the results, in order to synthesize and compare the data recorded in the instruments, a general synoptic table was prepared to record the elements that answer the guiding question.

For validation of the research, a search for articles in the databases was performed by two individual researchers using the same strategy of crossing the descriptors.

### RESULTS

06 articles were included in this review n=88 (Chart 1):

### DISCUSSION

Drug addiction is a heterogeneous disorder, as it affects people in different ways, for different reasons, in different contexts and circumstances (BRASIL, 2003). Chemical dependence, nowadays, corresponds to a widely publicized and discussed phenomenon, since the abusive use of psychoactive substances has become a serious social and public health problem in our reality (ASTRÉS et al, 2021).

However, talking about drug use, in particular chemical dependence, brings up issues directly related to the field of health, which implies the need to reflect on this phenomenon. It is necessary to point out that chemical dependence is a complex phenomenon,

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**Table 1 – Titles and authors of the articles selected as a sample of this integrative review. Porto Alegre, RS, Brazil, 2021.**

<table>
<thead>
<tr>
<th>Nº</th>
<th>TITLE</th>
<th>AUTHORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Occupational factors and psychotropic consumption among health workers of Psychosocial Care Centers (Factores laborales y consumo psicotrópico entre trabajadores de la salud de Centros de Atención Psicosocial)</td>
<td>ASTRÉS et al (2021)</td>
</tr>
<tr>
<td>02</td>
<td>Consumption of psychoactive substances by nursing workers: an integrative review</td>
<td>RIBEIRO et al (2020)</td>
</tr>
<tr>
<td>03</td>
<td>Use of psychoactive substances among nursing professionals in Primary Care and Hospital Institutions (Uso de substâncias psicoativas entre profissionais da enfermagem da Atenção Básica e Instituição Hospitalar)</td>
<td>SILVA AD, MELO EC, MARTINS JT, et al (2020)</td>
</tr>
<tr>
<td>04</td>
<td>Psychoactive substances and mental health in nursing professionals from the Family Health Strategy (Substâncias psicoativas e saúde mental em profissionais de enfermagem da Estratégia Saúde da Família)</td>
<td>BERTUSSI et al (2018)</td>
</tr>
<tr>
<td>05</td>
<td>Use of psychoactive substances by health professionals: Integrative Review (Uso de substâncias psicoativas por profissionais de saúde: Revisão Integrativa)</td>
<td>FERNANDES, Márcia Astrêns et al (2017)</td>
</tr>
<tr>
<td>06</td>
<td>Alcohol use and health behavior among nursing professionals (Uso de álcool e comportamento de saúde entre profissionais da enfermagem)</td>
<td>JUNQUEIRA et al (2017).</td>
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Source: Author, 2021.

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**Figure 2 - The tripod of chemical dependence**

Source: Theoretical basis for approaching chemical dependence (UNASUS, 2015).
with several variables involved. Thus, there is no simple etiological explanation that can cover all facets of the problem. UNASUS (2015) proposes to think of chemical dependence as a tripod, as shown in Figure 2.

This tripod is made up of the following variables: (a) environment: it is the scenario in which the individual’s encounter with the drug takes place, as well as the context in which it is used. In this case, the availability of the substance and the symbolism of its use deserve attention. Just reflect on the difference between drinking alcohol with friends, in a New Year’s Eve toast, and drinking it immediately before driving a vehicle; (b) substance: we must consider its form of presentation, accessibility and cost, its mode of use, its chemical characteristics – such as the potential to generate dependence, and its physiological effects. Rapid onset of action and intensity of effects correlate with greater or lesser potential for abuse (UNASUS, 2015).

In this sense, substances with a shorter half-life, in general, trigger more intense withdrawal syndromes. Substances can be classified into three types, according to the effects they cause: central nervous system stimulants: increase not only the activity of the central nervous system, but also of the autonomic nervous system, generating tachycardia, vasoconstriction, hypertension, in addition to an exaltation of mood and acceleration of thought.

This class includes cocaine, crack, amphetamines, ecstasy, nicotine and caffeine. It includes central nervous system depressants: they promote a reduction in brain activities and organic functions in general. Its effects are opposed to those of stimulants. This group comprises alcohol, opioids, benzodiazepines and solvents and central nervous system disorders: they alter the perception of time and space, as well as the reality around those who consume them. LSD, marijuana and mushrooms,

<table>
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<tr>
<th>WHO ARE HEALTH PROFESSIONALS?</th>
<th>SUBSTANCE USED</th>
<th>AUTHORS</th>
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<tbody>
<tr>
<td>Nurses (25.45%) and nursing technicians (22.20%), followed by psychologists (12.80%) and social workers (12.80%).</td>
<td>Tobacco, alcohol, marijuana, hypnotics and hallucinogens</td>
<td>ASTRÉS et al (2021)</td>
</tr>
<tr>
<td>Nursing team</td>
<td>Depressing drugs such as psychotropic drugs (78.57%) followed by the depressant alcohol (50.00%) and stimulant substances such as tobacco (35.71%).</td>
<td>RIBEIRO et al (2020)</td>
</tr>
<tr>
<td>70 Nursing Professionals</td>
<td>Alcohol (68.6%), followed by tobacco (48.6%), marijuana (8.6%) and sedatives (87.1%).</td>
<td>SILVA, AD, MELO, EC, MARTINS, JT, et al al (2020).</td>
</tr>
<tr>
<td>112 Nursing Professionals</td>
<td>More than half of the participants had already used alcohol once in their lives and almost half reported having consumed alcohol in the binge pattern.</td>
<td>BERTUSSI et al (2018)</td>
</tr>
<tr>
<td>Nurses, Doctors (anesthesiologists), Health Professionals in primary health care</td>
<td>Alcohol, tobacco, anxiolytics, opioids and self-medication with the most diverse drugs. The most commonly used drugs among medical professionals are alcohol, cocaine, benzodiazepines, marijuana, opiates, amphetamines and solvents.</td>
<td>FERNANDES, Márcia Austrê, et al (2017)</td>
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<tr>
<td>1,214 Nursing Professionals</td>
<td>Consumption of alcohol and/or other drugs (such as tobacco) at a problematic level showed higher rates of unhealthy behaviors, such as not practicing physical and sports activities and drinking above the limit of two doses.</td>
<td>JUNQUEIRA et al (2017).</td>
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workday (UNASUS, 2015).

In recent years, there has been an increase in the consumption of both licit and illicit drugs. Society accepts certain drugs as legal and condemns others as illegal. In the United States and much of Western Europe, as well as Brazil, the legal drugs are caffeine, nicotine and alcohol. In the Middle East, cannabis can be added to the list of legal drugs, while alcohol is prohibited. In the Andes of South America, the coca leaf is used to alleviate hunger and increase the ability to perform intense work at high altitudes. Thus, drugs are illicit or licit depending on the society that consumes them (Silva AD, Melo EC, Martins JT, et al, 2020).

Thus, in addition to the culture in which the consumption of a particular drug is inserted, it is important to know the main signs and symptoms of the use of these substances in the daily life of health professionals.

The professionals and the substances used were described by the authors of the articles selected for this research according to table 2, below:

The most used drugs were alcohol, tobacco, benzodiazepines, marijuana, anxiolytics, and opioids.

Through the selected articles, it is observed that the pattern of consumption of depressant drugs among users of these substances was severe enough for the diagnosis of dependence in most cases, while the consumption of marijuana and amphetamines was mainly marked by harmful use.

The drug most frequently used was alcohol, an expected fact, as it is a drug culturally accepted in society. Excluding alcohol and tobacco, the most commonly used drugs were amphetamines and benzodiazepines (DAVID & ROCHA, 2015).

According to the articles, 3 authors point out that stress was a triggering factor for nursing professionals to start using anxiolytic drugs without a medical prescription, or even inadequate working conditions, work overload due to lack of human resources and even several jobs (ASTRÊS et al, 2021; RIBEIRO et al, 2020; SILVA AD, MELO EC, MARTINS JT, et al et al, 2020).

The consequences related to the use of substances by health professionals are described in table 3.

The consequences for professionals related to drug consumption were described by at least three authors in their works (ASTRÊS et al (2021); RIBEIRO et al (2020); SILVA AD, MELO EC, MARTINS JT, et al et al (2020)). Among these consequences are stress, mental fatigue, irritation, anxiety and sleep-related disorders, unfavorable working conditions, job dissatisfaction, pressure at work and also problems unrelated to professional practice.

Still analyzing the performance of Nursing professionals who normally work as a team, such situations can cause wear and even disruptions in the team, as well as a lack of trust from the co-worker (ASTRÊS et al (2021); RIBEIRO et al (2020); SILVA AD, MELO EC, MARTINS JT, et al et al (2020); BERTUSSI et al (2018); FERNANDES, Márcia Asthree et al (2017); JUNQUEIRA et al (2017).

<table>
<thead>
<tr>
<th>CONSEQUENCES FOR THE PROFESSIONAL</th>
<th>AUTHORS</th>
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For the search for treatment, the main barrier faced by professionals is the difficult acceptance of a health professional that he also needs help. ASTRÊS et al (2021). Health professionals should be concerned not only with caring for others, but also with caring for themselves (JUNQUEIRA et al (2017).

It is extremely important that there is a motivation of the health professional to seek treatment, even though there is a questioning of the work team in accepting the chemically dependent professional in rehabilitation (JUNQUEIRA et al (2017).

In short, institutions/companies need to be increasingly sensitized to the issue of drugs, overcoming the punitive vision and mythos regarding the use and abuse of substances. Furthermore, it is necessary that both workers and employers assume the burden of facing this issue, since there is no denying that the problems arising from the use of psychoactive substances are
Chemical dependence is present in everyday work (DAVID & ROCHA, 2015).

In Brazil, in São Paulo, the Research Unit on Alcohol and Drugs (UNIAD) is located. This unit receives support and financial support from the Regional Council of Medicine of the State of São Paulo (CREME-SP), thus, data confidentiality is guaranteed and the professional body is not notified about the cases being treated without the professional/patient’s consent. This is because the professional’s fear of informing the professional body is the reason that leads to underreporting: only in 8% of the cases the professional councils were activated (ALVES et al., 2005).

CONCLUSION

Chemical dependence among health professionals is still a taboo topic, since publications in the national literature are restricted and it is even less discussed when compared to the international literature.

It is possible to conclude, from the articles researched, that discussing chemical dependence among health professionals is, currently, also discussing the issue of the health/disease process, both in conceptual terms, on the training and performance of professionals in employing institutions, and in terms of the issue of seeking treatment and health promotion.

It is believed that drug use by health professionals is relevant for future studies here in Brazil. This is because it is evident, from the data consulted in the literature, that people are afraid to talk about a subject loaded with stigma, or because there is a fear of self-compromise, or for exposing other people, such as family, close people and co-workers themselves.

It is perceived that an approach to the topic in undergraduate courses is necessary, sensitizing future professionals, through knowledge, to remain alert about the effects and risks of drugs, including legal ones. It is necessary to warn future health professionals that the ease of access to licit drugs makes them a vulnerable population to use and abuse, as they have free access to these substances in their daily work, and are also responsible for their storage and control.

On the reasons that lead health professionals to drug consumption – especially over-the-counter anxiolytic drugs – this use would have the objective of reversing or minimizing the professional wear and tear caused by stress, inadequate working conditions, work overload due to the lack of human resources or even by working several jobs, given the low salary remuneration. As a result, they end up developing other imbalances, since the effect of the drug can cause changes in the professional’s behavior, impairing logical reasoning, making necessary decisions and performing exclusive and specialized procedures of each professional, thus putting the lives of people under their care at risk.

In addition, the responsibility of the health institutions in which these professionals work is highlighted, which probably do not value the promotion of the quality of life of their employees. It is possible that these places lack adequate human resources conditions for the amount of work, not addressing the issue related to drug use in their programs and training of permanent education.

During this research, it is worth noting that one of the limits found was that not all articles that discuss chemical dependence of health professionals are freely available for accessing the material. In view of this, it is understood that it is necessary to reassess the availability of scientific materials, especially when dealing with subjects that are still little explored, since knowledge must be shared among all.

The results obtained in this work recommend the need for further research, as topics such as, for example, the consumption of licit and illicit psychoactive substances by students since graduation need to be debated, since it is a period in which, normally, there is an increase in responsibility, anxiety and competitiveness, in view of academic tasks, in addition to natural uncertainties about professional choice. The results also show that, possibly, there is a relationship that could be explored: the association between professional burnout syndrome and chemical dependence among health professionals.

We live in a globalized world, where drugs, licit and illicit, permeate the daily lives of people in general and health professionals specifically. The nurse, as a care professional, when immersed in this specific context, must not only take care of the other, but also take care of himself.


