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PSYCHOACTIVE SUBSTANCE USERS IN INTENSIVE CARE UNITS: A SYSTEMATIC REVIEW

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ABSTRACT

This study aimed to perform a systematic review of the literature on the sociodemographic and psychological profile of psychoactive substance users hospitalized in Intensive Care Units (ICU), as well as their clinical characteristics and treatments. To this end, a search for articles on the subject was carried out in the PubMed, Scopus, VHL and Pepsic databases. Empirical articles in Portuguese, English, and Spanish, published between 2014 and 2024, were selected. After applying inclusion and exclusion criteria, 12 studies that met the present proposal were selected. As main results, it was identified that patients using psychoactive substances admitted to the ICU were predominantly men, with a mean age of approximately 40 years, with alcohol being the most used substance among them. In addition, it was found that the primary or secondary cause of hospitalization was associated with the abusive consumption of psychoactive substances, and it was evident that such practices could influence the clinical outcome. It is believed that this review can stimulate the development of research on this scarce topic, in addition to helping intensive care health professionals, especially psychologists, in the care of this portion of the population that tends to be stigmatized and that often have their demands made invisible.

Keywords: Intensive Care Unit. Substance-Related Disorders. Psychology.

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Revista ARACÊ
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INTRODUCTION

Substance Use Disorder and other conditions induced by the use of drugs of abuse are characterized by the manifestation of cognitive, behavioral and physiological symptoms that are associated with the indiscriminate use of psychoactive substances, even in the face of impairments in the individual's daily life, and symptoms of intoxication, withdrawal and mental disorders may be present (AMERICAN PSYCHIATRIC ASSOCIATION, 2014). The World Health Organization (WHO) defines psychoactive substances as those that cause changes in the consciousness, mood, and cognitive processing of those who consume them. Therefore, they are able to change how the individual feels, thinks, and behaves. In addition, they can lead to dependence in those who use them. Examples of psychoactive substances are: alcohol, nicotine, opioids, cannabis, cocaine, amphetamines, hallucinogens, hypnotics, and sedatives (WHO, 2024).

Regarding the levels of drug use, the Global *Status Report on Alcohol and Health and Treatment of Substance Use Disorders*, published by the WHO in 2024, classifies them into four categories: 1) hazardous *substance use*): mental and physical damage are not yet present, but the use of the drug increases the risk of harmful health consequences, requiring specialized guidance from professionals in the area; 2) episode of harmful *use*: there is the presence of clinically significant damage or behaviors harmful to the health of the individual or third parties; 3) harmful pattern of psychoactive *substance use*: here the behaviors and consequences of the previous stage last for a period of at least 12 months, and finally; 4) *Substance dependence*: in this phase the subject does not have an efficient self-regulation in relation to the consumption of the substance, therefore, he is unable to exercise self-control, and the use of the psychoactive substance is privileged to the detriment of other aspects of his life (e.g., social relationships, work, self-care, etc.) (WHO, 2024).

The consumption of psychoactive substances demands attention, being a serious public health problem, because in addition to being considered a risk factor for the development of acute and chronic diseases, it makes users more vulnerable to physical trauma, as a result of involvement in car accidents, falls and situations of violence, therefore, it is a population with increased risk of morbidity and mortality (ANTUNES et al., 2013; PEREIRA et al., 2016). It is estimated that worldwide, in 2019, 2.5 billion people over 15 years of age consumed alcohol; in 2020, 1.25 billion used tobacco and; in 2021, 296 million people between the ages of 15 and 64 used illicit drugs (WHO, 2024).

Revista ARACÊ
ISSN: 2358-2472

In Brazil, the 3rd National Survey on Drug Use by the Brazilian Population, coordinated by the Oswaldo Cruz Foundation (Fiocruz) in 2015, identified that alcohol is the most widely used legal drug in the country, followed by tobacco and, in third place, drugs not prescribed by health professionals or used for purposes other than medical prescription. In relation to the most consumed illicit drugs, marijuana occupies the first place, followed by cocaine and, later, crack and other drugs of abuse. The survey also revealed that Brazil has about 3.5 million people in a condition of drug addiction (BASTOS et al., 2017).

In addition, in 2021, the SUS (Unified Health System) recorded approximately 400 thousand consultations motivated by mental and behavioral disorders due to the use of drugs and alcohol, 21% of which were in tertiary care, at the hospital level (MINISTRY OF HEALTH, 2022). Thus, addicted patients go through various hospital settings, either due to chronic comorbidities or due to acute problems that occur during the effect of substance use.

In this context, the Intensive Care Unit (ICU) presents itself as one of the scenarios where people with a history of intoxication due to the use of psychoactive substances or associated complications are often admitted in serious condition. Such units are capable of providing adequate support to those who are in a critical health condition, since there is continuous monitoring of patients and is characterized by being strongly equipped with devices that provide physiological support, with a view to maintaining life, in addition to having the presence of a multiprofessional and interdisciplinary team that provides assistance to all the biopsychosocial needs presented by the subject (MARSHALL et al., 2017).

Thus, in view of the scarcity of studies on a topic as emerging as the treatment of users of psychoactive substances admitted to the ICU, a systematic review of the literature was sought to investigate the sociodemographic and psychological profile of this group, its clinical characteristics and treatments performed in this hospital setting. It is hoped that this study can contribute not only to the development of research on the subject, but that, mainly, it will be able to help health professionals, especially psychologists, in their work with this portion of the population that tends to be stigmatized.

Revista ARACÊ
ISSN: 2358-2472

METHOD

The execution of this systematic review began with the choice of databases and definition of the descriptors that would be used in the research. The searches were made in the PubMed, Scopus, Virtual Health Library (VHL) and Pepsic databases. To this end, descriptors in Portuguese (and corresponding in English and Spanish) were used, which combined terms used to mention the use of substances, and their synonyms, combined with "UTI". They were: drug addiction and intensive care units; drug addicts and ICU; drug user and ICU; drug user and intensive care units; substance use disorders and ICU; Drug abuse and intensive care units; addiction to drugs and intensive care units; drug addiction and intensive care units; addiction to psychoactive substances and intensive care units; drug users and ICU; drug Users and intensive care units; substance-related disorders and ICU; substance-related disorders and Intensive Care Units; disorders related to substances and intensive care units; and, finally, drug users and intensive care units. Articles published between 2014 and 2024 were selected. The filter for selecting articles available for free in full was also applied.

Subsequently, the previously defined exclusion criteria were used: duplicate literature review articles that did not deal with the addicted population or the ICU context, and studies that were not available in full (new screening). Finally, it is noteworthy that to ensure the impartiality of the data analysis, the steps were carried out through peer review, that is, there was consensus among the researchers in defining the articles that made up the final analysis.

RESULTS AND DISCUSSION

The search resulted in 817 scientific articles, 59 in PubMed, 174 in Scopus, 584 in VHL and none in Pepsic. After this phase, 532 duplicate articles were eliminated and, subsequently, another 273 studies for meeting the exclusion criteria, four of which were literature reviews; 259 studies that did not have ICU patients with substance use disorder as their theme; ten articles that were unavailable in full. Therefore, 12 trials met the inclusion criteria and were selected for this systematic review, full reading and analysis. Such information is detailed in Figure 1.

Revista ARACÊ
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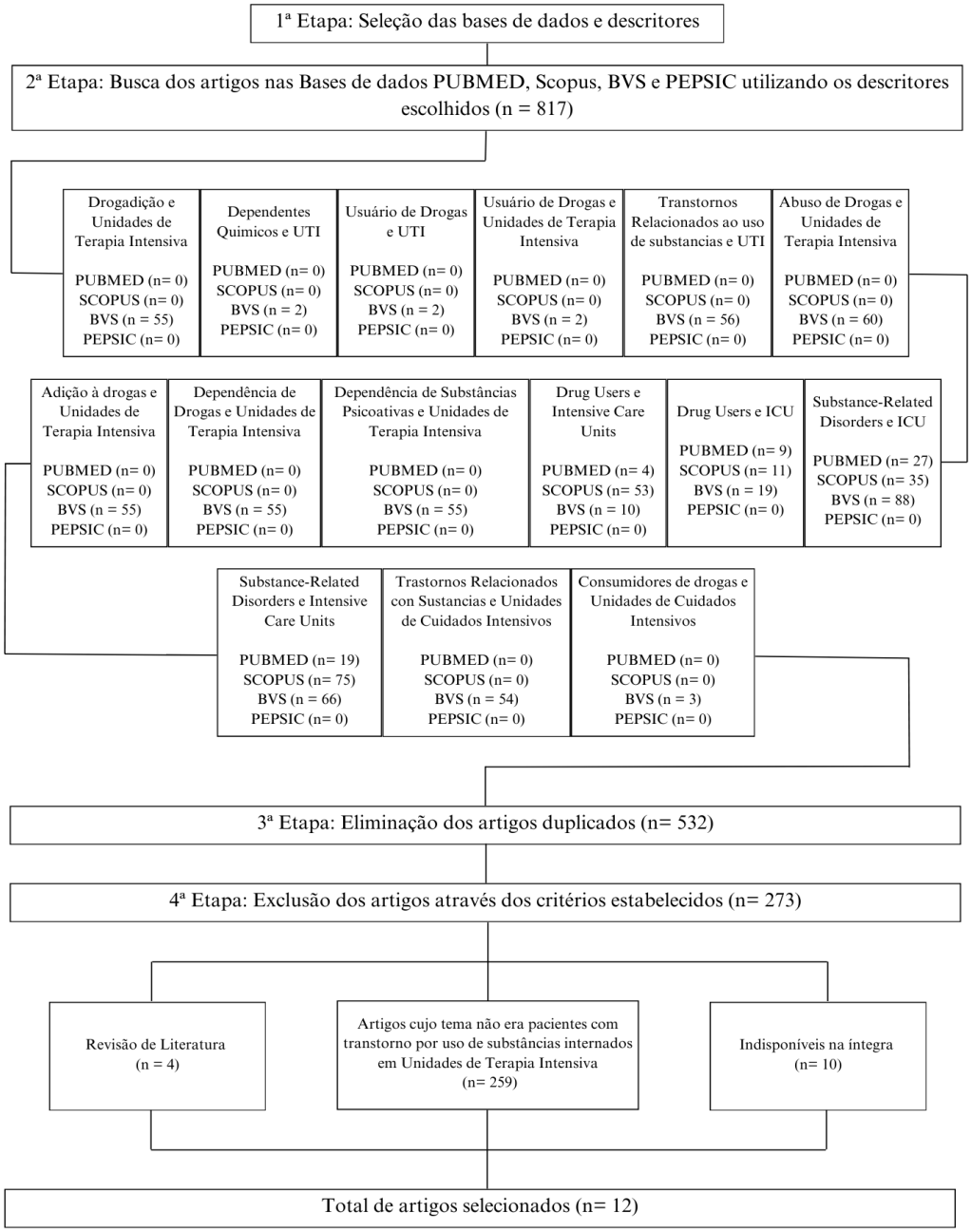
Figure 1 - Description of the Method and Detailing of the Descriptors



Of the 12 articles chosen, nine were in English, two in Portuguese and one in Spanish. The United States was the country that produced the most on the subject (four articles), followed by Spain with three studies, Brazil with two, and Malaysia, France, and Norway with one study each. The years in which there were more publications on the content, respectively, were in 2020 (n=4) and 2017 (n=2). The years 2014, 2015, 2016, 2018, 2019 and 2023 were marked by only one publication in each year. It is noted that since the peak of publications in 2020, there has been a sharp drop in productions on the

Revista ARACÊ
ISSN: 2358-2472

subject, since between 2021 and 2024 only one article was published in the investigated databases.

From the analysis of the research, relevant results were found, with a synthesis of the findings in Table 1. This resource provided data such as the title of the article, its authors, country and year of publication, objectives, sample characterization, and main results. Regarding the last topic, it was decided to summarize it in some elementary categories and name them through acronyms for better understanding, namely: Number of ICU admissions due to substance use (ROM); Sociodemographic data of patients admitted to ICU for use of psychoactive substances (SD); Clinical Characteristics (CC); Mental Health (S.M.); Most Used Psychoactive Substances (S.P.A); Need for Mechanical Ventilation (V.M.); Need for Vasoactive Drugs (VAD); Need for Sedation and Analgesia (S.A.); Average length of ICU stay (M.M.I.); and, Deaths and Discharges (OUTCOME). It is noteworthy that the construction of Table 1 respected the results found in each study and, therefore, some allowed access to more details related to the objectives of this review. Finally, it is noteworthy that for didactic purposes, the results of the studies were grouped by similarity and presented in subsections: Prevalence of admissions to Intensive Care Units due to the consumption of psychoactive substances; Most frequent clinical features; Sociodemographic profile of patients admitted to ICU for psychoactive substance abuse; Aspects of Mental Health; Psychoactive substances more frequent among those admitted to the ICU; ICU Admission and Advanced Life Support; and, Outcomes observed in ICU admissions.

Revista ARACÊ
ISSN: 2358-2472

Table 1 - Synthesis of the articles selected for the Systematic Review

SUMMARY OF SELECTED ARTICLES				
Title	Author / Year / Country	Objectives	Sample	Main results
Association between intoxication with psychoactive substances and adverse effects occurrence in consumers	Amanollahi, Shadnia, Mehrabi & Etemad 2023 Malaysia	Determine the effects of substance poisoning on the body.	Patients intoxicated with psychoactive substances admitted to a ward or ICU between March 2019 and April 2022 (N=800).	ADM: 400 participants; SD: Mostly male (81.5%), opioid users had a mean age of 40.31 years and alcohol 38.70 years; C.C.: hepatic dysfunction, renal dysfunction and cardiovascular dysfunction; S.P.A.: 82% were admitted with a history of opioid/stimulant use, and 75.5% with alcohol use; T.M.I.: 7.37 days for opioids and 7.54 for alcohol; OUTCOME: 28.9% of the ICU sample, mainly those who abused alcohol, died.
Age and gender differences in substance screening may underestimate injury severity: a study of 9793 patients at level 1 trauma center from 2006 to 2010	Beasley, Ostbye, Muhlbaier, Foley, Scarborough, Turley & Shapiro 2014 USES	To identify the proportion of patients admitted to a trauma center who were tested for the use of psychoactive substances and to evaluate the effects of consumption on health services.	Analysis of medical records of patients admitted to a trauma center between 2006 and 2010 (N=9,793).	ADM: Cocaine use was associated with a lower risk of ICU admission; D.S.: Mostly males with an average age equal to or less than 45 years; C.C.: Traffic accidents, falls, gunshot wounds were the main trauma mechanisms. S.P.A.: 24% used alcohol, in 21% of the cases the presence of tetrahydrocannabinol was identified and in 20% used cocaine; V.M.: No association was found between testing positive for alcohol and other drugs and the need for MV; Outcome: Alcohol and other drug use was not predictive of mortality.
Raising awareness for a low health-related quality of life in intoxicated ICU patients	Brandenburg, Soliman, Meulenbelt & Lange 2015 USES	To assess the self-reported quality of life of patients who survived ICU admission due to substance use intoxication.	Patients discharged from the ICU one year after hospitalization, between July 2009 and July 2013 (N=115)	ADM: 115 participants, 1.5%, of ICU admissions; OUTCOME: The in-hospital mortality rate was 3.5% and, one year after ICU admission, it was 26.5%. Those who abused psychoactive substances and were discharged from the hospital had lower levels of quality of life than those patients who were also admitted to the ICU, but did not maintain the same lifestyle habits.
Alcohol and Drug Abuse Resource Utilization in the ICU	Cervellione, Shah, Patel, Curiel Duran, Ullah & Thurm 2019 USES	To describe clinical characteristics of patients admitted to ICUs for events	Retrospective study of medical records of patients admitted to ICU between July	ADM: 158 participants, 21% hospitalized due to acute or chronic complications related to the abuse of psychoactive substances; D.S.: Mostly male (76%), with an average age of 50 years and only 34% were employed;

Revista ARACÊ
ISSN: 2358-2472

		related to the use of alcohol and other drugs.	2017 and December 2017 due to diagnosis related to drug or alcohol use (N=737).	C.C.: Acute Alcohol Intoxication, Alcohol Withdrawal Syndrome, Delirium Tremens, Upper Gastrointestinal Hemorrhage, Gastritis, Respiratory Failure, Cirrhosis and Liver Diseases; S.M.: 23% had a diagnosis of some mental disorder; S.P.A.: 81% of admissions were related to alcohol use, 31% to opiates, 30% to cocaine use, and 30% to cannabinoids; V.M.: No association was found between the consumption of psychoactive substances and MV; VAD: Patients who use drugs of abuse require lower doses of vasopressors; T.M.I.: There was no difference compared to the other critically ill patients; OUTCOME: 11% died.
Admission to intensive care for trauma related to alcohol or drug use, A "Teaching Moment" for the Beginning of change	Cordovilla-Guardia, Vilar-López, Lardelli-Claret, Navas, Guerrero-López & Fernández-Mondéjar 2017 Spain	To estimate how many trauma patients admitted to the ICU are candidates for a secondary prevention program related to alcohol and other drug consumption	Patients admitted to the ICU due to trauma and who tested positive for the use of psychoactive substances between November 2011 and March 2015 (N=242).	ADM: 103 participants who tested positive for substance use; SD: Mostly male (83.5%), mean age 43 years; C.C.: The main trauma mechanisms were: traffic accidents, falls from high planes and from one's own height, and others not specified; S.M.: 18% had a previous psychiatric disorder; S.P.A: Alcohol (37.3%), Benzodiazepines (15.7%), Cannabis (12.3%) and Cocaine (5.9%). In less expressive measures, antidepressants, opiates, methadone, barbiturates, and amphetamines appeared. T.M.I.: 4 days OUTCOME: 14 patients (22.6%) died.
Critical Illness Secondary to Synthetic Cannabinoid Ingestion	Korouani, Murad, Skull, Shapiro & Matthew 2020 USES	To describe the clinical manifestations of patients who used Synthetic Cannabinoids and were admitted to the ICU.	Retrospective study of the medical records of patients using synthetic cannabinoids admitted to the ICU between 2014 and 2016 (N=30).	ADM: 23 participants, 76.67% of admissions D.S.: Mostly male with an average age of 41 years; C.C.: Neurological effects after intoxication with the substance (coma, extreme agitation, seizures) and respiratory failure; S.M.: Polysubstance abuse, mental disorders or personality disorders; S.P.A: In addition to the use of synthetic cannabinoids used by all of them in the sample, most of them had a history of polysubstance abuse; V.M.: 70% required MV, 52% were extubated within 48 hours, and there were cases of self-extubation; S.A.: Higher doses of sedation were administered to those with extreme agitation.
Does a history of	López-López, Arranz-	To analyze the influence	Patients with a history of	ADM: 42 ICU participants; SD: Mostly male (76.2%) and mean age

Revista ARACÊ
ISSN: 2358-2472

psychoactive substances abuse play a role in the level of pain of the patient with severe trauma?	Esteban, Martinez-Ureta, Sánchez-Rascón, Morales-Sánchez & Chico-Fernández 2018 Spain	of the history of psychoactive substance use on the level of pain of trauma patients.	psychoactive substance use admitted to the ICU due to trauma (N=84).	43.1 years; S.P.A.: Alcohol (42.85%) and Benzodiazepines, followed by cocaine (23.80%), marijuana and heroin (7.14%); V.M.: The mean time of MV use was 10.76 days; S.A.: greater chance of presenting pain complaints of moderate or severe magnitude; T.M.I.: 14.2 days.
Identifying Life-Threatening Admissions for Drug Dependence or Abuse (ILIADDA): Derivation and Validation of a Model.	Nguyen, Boudemaghe, Leguelinel-Blache, Eiden, Kinowski, Manach, Peyrière & Landais 2017 France	To report the derivation and validation of a prognostic model for early identification of life-threatening admissions for psychoactive substance abuse.	Data extracted from the French National Database of Hospital Discharges between January 2009 and December 2014 of patients hospitalized for the use of psychoactive substances (N=66,101).	ADM: 2,602 (3.94%) patients were admitted to the ICU; C.C.: Acute opioid intoxication was one of the predictors of ICU admission; S.P.A: Acute Opioid Intoxication (Methadone, Heroin and Opium), Cocaine Intoxication and Intoxication with Other Unspecified Drugs (Hallucinogens, Sedatives/Hypnotics and Cannabis); OUTCOME: 66 (2.5%) died.
Clinical characteristics of substance abusers psychoactive drugs hospitalized in the Intensive Care Unit	Pereira, Silveira, Borges & Oliveira 2020 Brazil	To describe the causes of hospitalization and comorbidities of ICU patients with a history of substance abuse.	This was a retrospective study of the medical records of patients admitted to the ICU between 2012 and 2015 (N=865).	ADM: 449 patients were users of psychoactive substances (51.9% of the sample); SD: Mostly male (68.9%), mean age of 59.3 years; C.C.: Cardiovascular, respiratory, infectious, neoplasm, neurological, renal, metabolic, and gastrointestinal comorbidities; S.M.: Psychiatric comorbidities (depression, anxiety, and bipolar affective disorder); S.P.A: alcohol (22%); tobacco (48.7%); marijuana (3%); cocaine (2.3%); crack (2.7%). The use of polysubstances was manifested by 22% of the participants; V.M.: 56.5% required MV, most of them from 3 to 7 days; T.M.I.: four to ten days; OUTCOME: 26.3% (228) of the patients died.
Impact of harmful use of alcohol on the sedation of critical patients on mechanical	Sandiumenge, Torrado, Muñoz, Alonso, Jiménez, Alonso, Pardo & Chamorro	OBJECTIVE: To study the impact of the history of alcohol abuse on the sedation	Patients admitted to eight ICUs between November and December 2007 who used	ROM: 30 patients were abusing alcohol (25.2% of the sample); SD: Mostly male (76.7%) with a mean age of 55 years; S.M.: 13.3% used prescribed psychotropic medications (antidepressants, hypnosedics, antiepileptics and antipsychotics);

Revista ARACÊ
ISSN: 2358-2472

ventilation: A multicentre prospective, observational study in 8 Spanish intensive care units	2016 Spain	analgesia of patients on mechanical ventilation and to evaluate the results of hospitalizatio n.	MV for more than 24 hours (N=119).	S.P.A: In addition to alcohol abuse, 26.7% were smokers and 10% used other psychoactive substances (cocaine, cannabis, opiate derivatives and psychostimulants); V.M.: Alcohol abuse was associated with longer periods of MV use; S.A.: They required longer periods of sedation analgesia and Midazolam was the most used drug; T.M.I.: Longer hospitalization time compared to those who did not use alcohol abusively.
Characterizati on of patients intoxicated by drugs of abuse in intensive care	Santana, Hungary, Cristophoro, Elvira, Gavioli & Oliveira 2020 Brazil	To characterize the epidemiology of ICU admissions related to the effects of the use of alcohol and other drugs of abuse.	Cross-sectional study of the medical records of patients admitted to the ICU between January 2011 and December 2015 with diagnoses related to the consumption of psychoactive substances (N=138).	ADM: 138 patients admitted to the ICU in the period, an average of 27.6 per year; D.S.: Mostly male (89.13%), with a mean age of 47.9 years, 43.5% had up to eight years of schooling; C.C.: 97.1% of hospitalizations were due to acute conditions due to chronic use of substances (endocrine/metabolic, neurological, vascular, respiratory and digestive diseases); S.M.: 21% had mental and behavioral disorders; S.P.A: Alcohol (84%) and alcohol associated with other drugs (8.6%). This was followed by crack (4.3%), marijuana (1.4%) and cocaine (1.4%); T.M.I.: 16.6 days; OUTCOME: 38.4% died.
Substance abuse-related admissions in a mixed Norwegian intensive care population	Tollisen, Bjerva & Hadley 2019 Norway	To describe the characteristic s of patients hospitalized with hospitalizatio ns related to psychoactive substance abuse.	Patients admitted to the ICU between February 2014 and February 2015 (N=852).	ADM: 168 patients were hospitalized for diagnoses related to substance abuse; D.S.: Male (78%) and mean age 48 years C.C.: ICU admissions were directly or indirectly related to the abusive consumption of psychoactive substances, as well as to the effects of their chronic use (trauma, cardiovascular, infectious, respiratory, gastrointestinal, neurological and intoxication effects of the substance); S.P.A.: alcohol (61%), illicit drugs (34%) and prescription psychotropic drugs (5%); V.M.: 82% of the patients require MV and the mean use was 1 day; T.M.I.: 2.4 days; OUTCOME: 13% died in the ICU and 20% in the hospital.
Legend: ADM: number of ICU admissions for substance use; D.S.: Sociodemographic Data; C.C.: Clinical Features; S.M.: Mental Health; S.P.A: Most used psychoactive substances; V.M.: Mechanical Ventilation; VAD: Vasoactive Drugs; S.A.: Sedoanalgesia; T.M.I.: Average length of stay in the ICU; OUTCOME: Deaths and Discharges.				

Revista ARACÊ
ISSN: 2358-2472

PREVALENCE IN INTENSIVE CARE UNITS OF ADMISSIONS DUE TO THE CONSUMPTION OF PSYCHOACTIVE SUBSTANCES

In the trials, there was no consensus on the prevalence of ICU admissions due to the abuse of psychoactive substances, since they showed great variability: 1.5% (BRANDENBURG et al., 2015), 3.94% (NGUYEN et al., 2017), 20% (TOLLISEN et al., 2019), 21% (CERVELLIONE et al., 2019), 23.6% (SANTANA et al., 2020), 51.9% (PEREIRA et al., 2020) and 76.67% (KOUROUNI et al., 2020). The study by Santana et al. (2020) observed that between 2011 and 2015, in a city in Brazil, there were an average of 27.6 ICU admissions annually due to the use of drugs of abuse. In addition, the research by Amanollahi et al. (2023) found that 7.7% of patients admitted to the ICU had already been critically ill patients in the last year.

This variability can be explained by aspects such as the design of the studies, the collection period, and the particular cultural, sociodemographic, and economic factors of the survey participants in each country. Thus, as previously discussed, research on the association between drug use and ICU admissions is still incipient in Brazil. However, when considering hospitalizations in Brazilian emergency services, it is possible to understand the intermediate position that the country occupied in the findings of this systematic review, that is, prevalence of 23.6% (SANTANA et al., 2020) and 51.9% (PEREIRA et al., 2020).

In a study conducted by Oliveira et al. (2023), in Brazil, on the trend of hospitalizations due to alcohol between 2010 and 2020, a decline in cases reported in the Hospital Information System of the Unified Health System (SIH/SUS) was observed, which was also observed by Galvão et al. (2024) in a sample of Brazilian adolescents hospitalized between 2017 and 2022 for substance use disorders and by Afonso et al. (2022) in adults of both sexes, aged 50 to 69 years, who use alcohol. Therefore, this decrease in the incidence of hospitalizations of Brazilian users of psychoactive substances could explain the intermediate position that Brazil occupies among the other countries in this review. This fact may be due to the strengthening of Psychosocial Care Centers (CAPS), changes in habits over generations (AFONSO et al., 2022), public policies and legislation implemented in recent years, such as Law 11.705/2008, commonly known as "Dry Law" (SANTANA et al., 2022). However, it should be mentioned that, on the other hand, such a reduction in the incidence of hospitalizations may be linked to the population's lack of access to health monitoring services or also to the underreporting of Substance Use Disorders (GALVÃO et al., 2024; OLIVEIRA et al., 2023), which leads to the need for other

Revista ARACÊ
ISSN: 2358-2472

studies that seek to better investigate this phenomenon and that translate, especially, the Brazilian reality.

MOST FREQUENT CLINICAL FEATURES

Most of the articles (n=9) specified the clinical characteristics that motivated ICU admission, as well as the main comorbidities related to substance abuse. The data found can be divided into two groups, the first was composed of patients whose reason for hospitalization was primary to the continuous use of psychoactive substances, that is, those who presented organic dysfunctions caused by their chronic use and exacerbations as a result of drug abuse, and the second group contained those causes indirectly associated with the use of substances.

Thus, the reason for the hospitalization of critically ill patients in the first group and their comorbidities were, mainly: acute alcohol intoxication, Alcohol Withdrawal Syndrome, Delirium Tremens (CERVELLIONE et al., 2019), hepatic, renal, cardiovascular (AMANOLLAHI et al., 2023), respiratory, infectious, metabolic, gastrointestinal dysfunctions and, as comorbidities, neurological, endocrine diseases, and neoplasms (PEREIRA et al., 2020; SANTANA et al., 2020). Regarding the reason that caused the ICU admissions in the second group, the following stood out: Traumas caused by traffic accidents, falls from height/high plane and from one's own height, gunshot wounds (BEASLEY et al., 2014; CORDOVILLA-GUARDIA et al., 2017) and neurological effects of intoxication with the substance (coma, extreme agitation and seizure) (KOUROUNI et al., 2020; TOLLISEN et al., 2019). Cordovilla-guardia et al. (2017) identified that, as a consequence, patients who were victims of TBI had neurological sequelae secondary to trauma and spinal cord injuries.

Based on the results presented, it is observed that the abuse of psychoactive substances may be related to the direct or indirect causes of hospitalization in the ICU. This fact reflects not only the severity of direct effects, such as overdoses or acute intoxication, but also the complexity of indirect impacts. This suggests that treatment in the ICU should not be limited to the management of immediate crises, but also to the consequences caused by chronic use of the substance, such as dysfunctions, chronic diseases, and neoplasms.

Revista ARACÊ
ISSN: 2358-2472

SOCIODEMOGRAPHIC PROFILE OF PATIENTS ADMITTED TO ICU FOR PSYCHOACTIVE SUBSTANCE ABUSE

In addition to the aspects mentioned above, the sociodemographic profile of the population is highlighted, which was presented in ten of the 12 articles. There was unanimity among the studies about the sex and age group of this public, that is, a higher prevalence of males (AMANOLLAHI et al., 2023; BEASLEY et al., 2014; CERVELLIONE et al., 2019; CORDOVILLA-GUARDIA et al., 2017; KOUROUNI et al., 2020; LÓPEZ-LÓPEZ et al., 2018; NGUYEN et al., 2017; PEREIRA et al., 2020; SANDIUMENGE et al., 2016; SANTANA et al., 2020; TOLLISEN et al., 2019), adults (AMANOLLAHI et al., 2023; PEREIRA et al., 2020), mostly unemployed and with low levels of education (CERVELLIONE et al., 2019; SANTANA et al., 2020).

With regard to the population hospitalized in ICUs with a history of substance abuse, there is a predominance of men around 40 years of age. It was found that, in general, the studies did not characterize their sample in relation to race, income and education, information that is considered relevant for the development of public health projects and policies in the face of substance use disorder.

The profile in relation to the sex and age of addicts admitted to ICUs corroborates the literature in general about the characteristics of users of predominant psychoactive substances. In the national scenario, it is observed that cultural issues influence how men are socialized and stereotypes related to gender roles (AFONSO et al., 2022; GALVÃO et al., 2024).

In this sense, the use of these substances by men tends to be normalized and even expected in relaxed environments, while it is condemned when performed by women (AFONSO et al., 2022). However, even though this pattern is hegemonic in Brazilian society, there has been an increase in the rate of hospitalization of women for substance use disorder in recent years (RODRIGUES et al., 2019).

Regarding age, in addition to the high prevalence among those aged 40 to 59 years, an increase in the incidence of users over 60 years of age was observed, especially in the northern region of Brazil, which can be attributed to the condition of socioeconomic vulnerability, absence of a support network, lack of leisure activities and presence of mental disorders (RODRIGUES et al., 2019). Therefore, the importance of an interdisciplinary approach and public policies that respect the specificities of this group is pointed out.

Revista ARACÊ
ISSN: 2358-2472

Finally, in parallel with the sociodemographic data related to the abuse of psychoactive substances, it is observed that men, when compared to women, have higher morbidity and mortality rates in the country. According to data on male morbidity and mortality in Brazil, the life expectancy of men is, on average, 7.1 years lower than that of women (MINISTRY OF HEALTH, 2018). In addition, men are responsible for 76% of hospitalizations due to injuries, poisonings, and other consequences of external causes, often linked to substance use. Thus, the epidemiological profile refers to the need for preventive health actions that consider sociodemographic specificities.

ASPECTS OF MENTAL HEALTH

The conditions related to the mental health of the patients drew attention in the present investigation. In this regard, five of the 12 studies showed that prior to ICU admission, patients had diagnoses of psychiatric disorders, whose prevalence ranged from 18% (CORDOVILLA-GUARDIA et al., 2017) to 31.2% (PEREIRA et al., 2020). Such comorbidities corresponded to depressive disorders, anxiety disorders, bipolar affective disorder, personality disorders, substance use disorder, and other mental and behavioral disorders not specified in the articles (KOUROUNI et al., 2020; PEREIRA et al., 2020; SANTANA et al., 2020). Regarding the use of psychotropic drugs with medical prescription, only one study presented data in this regard, indicating that 13.3% of the patients in the study population had a history of using antidepressants, hypnosedics, antiepileptics or antipsychotics with medical indication (SANDIUMENGE et al., 2016).

Thus, as observed, a relevant part of the studies pointed to a high prevalence of psychiatric disorders among addicted patients admitted to the ICU. This fact can be explained by the fact that psychiatric disorders increase the propensity to use and abuse psychoactive substances, and, on the other hand, substance abuse can also precipitate or trigger psychiatric disorders in people who did not have a pre-existing condition (AMERICAN PSYCHIATRIC ASSOCIATION, 2014). This interrelationship highlights the complexity of the clinical management of these patients in the ICU setting. In addition to the challenges associated with drug abuse, such as withdrawal syndrome, the existence of psychiatric disorders can increase morbidity and mortality, which can interfere with treatment adherence and coping with illness and hospitalization (BOTEGA et al., 2012).

In the present study, no psychological interventions in ICUs aimed at managing withdrawal symptoms or demands related to substance use behavior were identified. This

Revista ARACÊ
ISSN: 2358-2472

reinforces the importance of reflecting on the psychologist's performance in patients who have psychoactive substance use disorders hospitalized in the ICU. The psychologist is part of the care team and routinely acts on issues inherent to the health-disease process, including coping with problems and managing symptoms of psychiatric disorders (e.g., anxiety, depression, and stress). In addition, the role of the health professional in the interdisciplinary team towards users of psychoactive substances has as its main strategy to offer care that promotes changes in the patient's life (PILON et al., 2011), therefore, psychological interventions should also encompass this demand.

The literature highlights several effective psychological approaches in the treatment of addiction to psychoactive substances, including cognitive-behavioral therapies (CBTs) (ZANELATTO, 2011), the brief intervention model (SILVA et al., 2011), motivational interviewing (VENDAS et al., 2011), group psychotherapy (SILVA et al., 2011), the harm reduction approach (MARQUES et al., 2011), among others. In view of this, it is important to emphasize the possibilities of the psychologist's performance in this context, according to the theoretical framework presented. However, such interventions need to be carefully adapted, considering that the context of intensive care requires more flexible strategies that are sensitive to the physical and psychological conditions of patients. On the other hand, it is an opportune moment to raise awareness about adherence to specialized treatment after hospital discharge, considering that the patient often recognizes the problem and is motivated to change, since he is already abstinent and away from the triggers associated with drug use.

In this line of care, Cordovilla-Guardia et al. (2017) conducted a research that aimed to identify, through a substance screening program, patients admitted to ICU for trauma who could be candidates for Brief Motivational Intervention. This intervention consisted of a semi-structured interview that sought to promote behavioral changes and encourage healthier lifestyles. The authors argue that the ICU environment, due to clinical severity, offers a unique opportunity for the patient, with adequate support, to initiate a process of change. The results showed that 16.9% of the total number of patients, between 16 and 70 years of age, admitted to the ICU due to trauma, would be candidates for a systematic screening program for alcohol, drugs and psychotropic drugs with the intention of performing the Brief Motivational Intervention. However, no studies were identified in the present review that actually carried out interventions aimed at behavioral change related to substance abuse. Thus, it is suggested that future studies investigate the effectiveness of

Revista ARACÊ
ISSN: 2358-2472

psychological interventions aimed at promoting behavioral changes in patients admitted to ICUs due to the use/abuse/dependence of psychoactive substances.

PSYCHOACTIVE SUBSTANCES MORE FREQUENT AMONG THOSE ADMITTED TO ICU

Entre os estudos avaliados, 11 especificaram a substância de escolha dos pacientes. O álcool foi a substância mais frequentemente consumida (AMANOLLAHI et al., 2023; BEASLEY et al., 2014; CERVELLIONE et al., 2019; CORDOVILLA-GUARDIA et al., 2017; LÓPEZ-LÓPEZ et al., 2018; PEREIRA et al., 2020; SANDIUMENGE et al., 2016; TOLLISEN et al., 2019; SANTANA et al., 2020). Além do álcool, destacam-se o uso do tabaco (PEREIRA et al., 2020; SANDIUMENGE et al., 2016) e drogas ilícitas, como: cocaína (BEASLEY et al., 2014; CERVELLIONE et al., 2019; CORDOVILLA-GUARDIA et al., 2017; LÓPEZ-LÓPEZ et al., 2018; NGUYEN et al., 2017; PEREIRA et al., 2020; SANDIUMENGE et al., 2016; SANTANA et al., 2020), Cannabis e derivados (BEASLEY et al., 2014; CERVELLIONE et al., 2019; CORDOVILLA-GUARDIA et al., 2017; KOUROUNI et al., 2020, LÓPEZ-LÓPEZ et al., 2018, PEREIRA et al., 2020; SANDIUMENGE et al., 2016; SANTANA et al., 2020) e Crack (PEREIRA et al., 2020, SANTANA et al., 2020). Além das substâncias supracitadas, registra-se a ocorrência de uso, em estudos internacionais, de Opiáceos/Opióides (AMANOLLAHI et al., 2023, CERVELLIONE et al., 2019; CORDOVILLA-GUARDIA et al., 2017; NGUYEN et al., 2017, SANDIUMENGE et al., 2016), benzodiazepínicos (CORDOVILLA-GUARDIA et al., 2017; LÓPEZ-LÓPEZ et al., 2018) e psicotrópicos com prescrição médica (SANDIUMENGE et al., 2016, TOLLISEN et al., 2019). Por fim, dois estudos referiram o uso de polissubstâncias pelos participantes (KOUROUNI et al., 2020; PEREIRA et al., 2020).

In addition, studies have shown that the following were predictive of ICU admission: high alcohol consumption (BEASLEY et al., 2014), acute opioid intoxication (NGUYEN et al., 2017) and lower Glasgow Coma Scale scores (BEASLEY et al., 2014). On the other hand, Beasley et al. (2014) found that cocaine use was associated with a lower risk of ICU admission, which was observed by the authors as an unusual result, which can be attributed to a limitation of the study, because the level of cocaine consumption in the sample was not accurately measured. Therefore, for more reliable data on the relationship between the abuse of this substance and the need for intensive support, it is suggested

Revista ARACÊ
ISSN: 2358-2472

that future studies include variables such as chronic and occasional cocaine use be investigated.

Regarding the prevalence of alcohol consumption, studies carried out with Brazilian samples hospitalized for Substance Use Disorder reinforce the findings of this review (AFONSO et al., 2022; GALVÃO ET AL 2024; OLIVEIRA et al., 2023; PEREZ et al., 2020; SANTANA et al., 2022; SANTANA et al., 2023). As it is a licit substance, alcohol has its access facilitated and its continuous use becomes frequent (SANTANA et al., 2022; SANTANA et al., 2023). There is media appeal in advertising campaigns, which attract different age groups. In addition, the role played by peers in the abusive use of alcohol is highlighted, that is, the social pressure exerted by the groups, in which individuals are inserted, can favor the accentuated consumption of the substance (GALVÃO et al., 2024; PEREZ et al., 2020). Therefore, the normalization of alcohol use can cover up the risks associated with excessive alcohol intake, making it difficult to identify and prevent abusive behaviors. The unanimity of the researchers presented in this review about the history of alcohol use among patients admitted to the ICU reveals the deleterious effects of the substance when used abusively.

In addition to the use of alcohol, tobacco stands out as one of the main substances used among patients admitted to ICUs in Brazil. Its prolonged use can be decisive for hospitalization, mainly due to respiratory insufficiencies and other complications. In addition, it is important to highlight that, despite the significant reduction in tobacco consumption rates in recent years, achieved by educational and health prevention efforts, there is currently a worrying increase in its use among young people, mainly driven by the growing popularity of electronic cigarettes (CARVALHO, 2018). This scenario raises an alert for possible long-term health complications, including increased morbidity and mortality associated with the continuous use of nicotine-based products.

Finally, although the rate of hospital and ICU admissions due to alcohol abuse is higher than that of other psychoactive substances in Brazil, the health risk associated with the use of polysubstances is highlighted. This mode of consumption can lead to serious damage and acute injuries that require urgent or emergent care in health services, due to the increased risk of death (SANTANA et al., 2022; SANTANA et al., 2023).

Revista ARACÊ
ISSN: 2358-2472

ICU ADMISSION AND ADVANCED LIFE SUPPORT

Regarding the factors related to ICU admission, ten of the 12 studies present data on the need for Mechanical Ventilation (MV), Vasoactive Drugs (VAD), management of sedation analgesia and length of ICU stay. Of the seven articles that evaluated the demand for MV by critically ill patients with drug addiction, three studies found no association between the consumption of alcohol and other drugs and the need for Mechanical Ventilation (BEASLEY et al., 2014; CERVELLIONE et al., 2019; LÓPEZ-LÓPEZ et al., 2018). There was a large discrepancy between the time of MV use by ICU patients who were users of psychoactive substances, ranging from an average of one to 10.76 days (KOUROUNI et al., 2020; PEREIRA et al., 2020; TOLLISEN et al., 2019).

Regarding Vasoactive Drugs, only one of the studies mentioned this variable. According to Cervellione et al. (2019), patients who use drugs of abuse admitted to the ICU required lower doses of vasopressors compared to non-addicts. One hypothesis for this result is the characteristic agitation of this patient profile, which would generate hemodynamic alterations, in this case, hypertension. Although this data is relevant and opens the door to further research on the subject, it is noteworthy that the study in question does not address in detail the correlation between the substance used and the need for vasopressors, therefore, it is not possible to affirm that such a finding is hegemonic in this population. In view of the above, it is suggested that further research be carried out to consider the properties of the substances and their hemodynamic consequences. In addition, it is proposed that aspects such as the patient's severity and history of substance use should also be assessed, that is, to evidence whether there is a dangerous consumption of the psychoactive substance, episode of harmful use, harmful pattern of consumption, substance dependence, or withdrawal syndrome (WHO, 2024).

As for sedation analgesia, it is common for drug patients in ICU to need high doses of sedatives, and weaning is a slow and challenging process because they often manifest extreme agitation that is characteristic of this critical patient profile. In addition, they presented unsatisfactory results (71% of participants) after using an opioid antagonist, Naloxone (KOUROUNI et al., 2020).

There is also a need for attention to pain management in this population. López-López et al. (2018) investigated the relationship between a history of substance abuse and pain management in polytrauma patients admitted to the ICU. It was identified that users of psychoactive substances were more likely to present moderate to severe pain complaints

Revista ARACÊ
ISSN: 2358-2472

compared to those who did not use drugs of abuse, which could be attributed to tolerance to sedatives and withdrawal syndrome. Thus, the importance of pain control protocols that respect the specificities of this group for effective pain management is highlighted.

The researchers in this review also observed that patients who abused alcohol required longer periods of sedation analgesia (LÓPEZ-LÓPEZ et al., 2018; KOUROUNI et al., 2020; SANDIUMENGE et al., 2016). As for sedatives, Midazolam was the most used for this purpose. However, it was often necessary to combine two or more sedatives, as well as to carry out successive applications of these drugs. In addition, these patients showed more resistance to sedation, with more sedation failures and cases of withdrawal from sedatives than those who did not use alcohol abusively. This finding partially corroborates the study by Karir et al. (2012) who pointed out that the history of substance abuse was strongly related to an increase in the need for sedation analgesia, including the use of opioids, in patients undergoing prolonged mechanical ventilation.

Regarding the average length of ICU stay, the studies ranged from 2.4 days to 16.6 days (AMANOLLAHI et al., 2023; CERVELLIONE et al., 2019; CORDOVILLA-GUARDIA et al., 2017; LÓPEZ-LÓPEZ et al., 2018; PEREIRA et al., 2020; SANTANA et al., 2020; TOLLISEN et al., 2019). There was no consensus among the authors on the influence of the use of psychoactive substances and length of stay in the ICU. Cervellione et al. (2019) did not observe a difference between the length of ICU stay of this public compared to other critically ill patients. In turn, Sandiumenge et al. (2016) associated alcohol abuse with longer hospitalization. The length of stay in the ICU can be influenced by several factors, including the nature of the disease and the therapeutic needs (FAVARIN et al., 2012).

OUTCOMES OBSERVED IN ICU ADMISSIONS

Finally, the clinical outcomes of these addicted critically ill patients evidenced in the studies are synthesized. There was a tendency among the articles to focus on mortality during ICU stay rather than on favorable outcomes, and there was no consensus on the prevalence of deaths. ICU mortality rates ranged from 2.5% to 38.4% (AMANOLLAHI et al., 2023; BRANDENBURG ET AL, 2015; CERVELLIONE et al., 2019; CORDOVILLA-GUARDIA et al., 2017; NGUYEN et al., 2017; PEREIRA et al., 2020; SANTANA et al., 2020; TOLLISEN et al., 2019)

There is no consensus on the substance of abuse and the occurrence of death in the ICU. Controversial results were found by Beasley et al. (2014) and Amanollahi et al.

Revista ARACÊ
ISSN: 2358-2472

(2023) regarding alcohol consumption and unfavorable outcomes. While the first article did not indicate a relationship between alcohol consumption and mortality, the second noted the opposite. The outcomes presented by the studies indicate high morbidity and mortality of critically ill patients with a history of substance abuse admitted to the ICU, worsening quality of life, and high prevalence of psychiatric disorders (BRANDENBURG et al., 2015).

Thus, it is necessary to implement actions aimed at survivors of ICU admissions, as scholars emphasize the possibility of maintaining the abusive use of psychoactive substances, even after discharge from the ICU, which can generate new intoxications by drugs of abuse (BOCHNER et al., 2020), death by overdose (BIANCO et al., 2023) or readmissions due to the evolution of diseases related to chronic substance use or impairments that occur due to a vulnerable health condition of the subject (RODRIGUES et al., 2019; SANTANA et al., 2023). In addition to deaths occurring during hospital admissions, it is noteworthy that the use of psychoactive substances is associated with violent behavior on the part of users and a greater probability of the individual being a victim of homicide or trauma (LEMOS et al., 2019; RODRIGUES et al., 2019; VELOSO et al., 2019). In view of the above, health professionals, managers and researchers need to find viable and effective ways to break this vicious cycle that has consequences, not only for the user of psychoactive substances and family members, but also burdens the health system with ICU admissions due to avoidable injuries and recurrent rehospitalizations, in addition to the damage to society as a whole. Comprehensive, patient-centered care is needed, a look beyond the behavior and lifestyle of drug users, and the development of co-responsibility between sectors and levels of health care.

CONCLUSION

Despite being a daily demand in the work of ICU professionals, the results of this review indicate not only the scarcity in the literature of productions that address the profile and behaviors adopted in the care of patients with substance use disorder hospitalized in ICUs, but also reveal a decline in scientific production on this theme. Such facts can be considered as an indication of the invisibility of the population studied, as well as the lack of systematization in the care of these patients.

Through this systematic review of the literature, it was possible to observe that patients who use or abuse psychoactive substances are more likely to develop clinical complications, face greater challenges in therapeutic management, and have a higher

Revista ARACÊ
ISSN: 2358-2472

probability of negative outcomes during ICU stay. In view of the evidence presented, it is of paramount importance to deepen the care provided to this population. It is therefore recommended that the multidisciplinary team develop and implement care protocols that promote more dignified care that is appropriate to their needs and specificities. Such measures are essential to support individuals who, in many situations, have already faced various forms of marginalization, guaranteeing them qualified health care that respects their fundamental rights.

Revista ARACÊ
ISSN: 2358-2472

REFERENCES

1. Afonso, P. P. L., Afonso, M. L., Barbosa, G. R., & Justo, A. F. O. (2022). Hospitalization due to mental and behavioral disorders caused by use of alcohol and psychoactive substances among older adults and elderly people in Brazil: A cross-sectional study. São Paulo Medical Journal, 140(2), 229–236. https://doi.org/10.1590/1516-3180.2021.0115.R1.22062021

2. Amanollahi, A., Shadnia, S., Mehrabi, Y., & Etemad, K. (2023). Association between intoxication with psychoactive substances and adverse effects occurrence in consumers. Frontiers in Public Health, 11, 1-8. https://doi.org/10.3389/fpubh.2023.1228854

3. American Psychiatric Association. (2014). Manual diagnóstico e estatístico de transtornos mentais: DSM-5 (5th ed.; M. I. C. Nascimento, Trans.). Porto Alegre, RS: Artmed.

4. Antunes, F., & Oliveira, M. L. (2013). Características dos pacientes internados numa unidade de terapia intensiva por abuso de drogas. Investigación y Educación en Enfermería, 31(2), 201-209. https://doi.org/10.17533/udea.iee.11647

5. Bastos, F. I. P. M., Vasconcellos, M. T. L. B., Reis, R. B., et al. (Eds.). (2017). III Levantamento Nacional sobre o uso de drogas pela população brasileira. Fiocruz. https://www.arca.fiocruz.br/handle/icict/34614

6. Beasley, G. M., Ostbye, T., Muhlbaier, L. H., Foley, C., Scarborough, J., Turley, R. S., & Shapiro, M. L. (2014). Age and gender differences in substance screening may underestimate injury severity: A study of 9793 patients at level 1 trauma center from 2006 to 2010. Journal of Surgical Research, 188(1), 190-197. https://doi.org/10.1016/j.jss.2013.11.1103

7. Bianco, M. C. M., Tardelli, V. S., Brooks, E. R., Areco, K. C. N., Tardelli, A. O., Bandiera-Paiva, P., Santaella, J., Segura, L. E., Castaldelli-Maia, J. M., Martins, S. S., & Fidalgo, T. M. (2023). Drug overdose deaths in Brazil between 2000 and 2020: An analysis of sociodemographics and intentionality. Brazilian Journal of Psychiatry, 45(5), 405–413. https://doi.org/10.47626/1516-4446-2022-3023

8. Bochner, R., & Freire, M. M. (2020). Análise dos óbitos decorrentes de intoxicação ocorridos no Brasil de 2010 a 2015 com base no Sistema de Informação sobre Mortalidade (SIM). Ciência & Saúde Coletiva, 25(2), 761–772. https://doi.org/10.1590/1413-81232020252.15452018

9. Botega, N. J., & Smaira, S. I. (2012). Morbidade psiquiátrica no hospital geral. In N. J. Botega (Ed.), Prática psiquiátrica no hospital geral: Interconsulta e emergência (3rd ed., pp. 208-219). Porto Alegre: Artmed. ISBN 978-85-363-2687-0

10. Brandenburg, R., Soliman, I. W., Meulenbelt, J., & Lange, D. W. (2015). Raising awareness for a low health-related quality of life in intoxicated ICU patients. Clinical Toxicology, 53(6), 585. https://doi.org/10.3109/15563650.2015.1045068

Revista ARACÊ
ISSN: 2358-2472

11. Brasil, Ministério da Saúde. (2022, February 10). Atendimento a pessoas com transtornos mentais por uso de álcool e drogas aumenta 12,4% no SUS. Portal Gov.br. https://www.gov.br/saude/pt-br/assuntos/noticias/2022/fevereiro/atendimento-a-pessoas-com-transtornos-mentais-por-uso-de-alcool-e-drogas-aumenta-12-4-no-sus

12. Carvalho, A. de M. (2018). Cigarros Eletrônicos: O que sabemos? Estudo sobre a composição do vapor e danos à saúde, o papel na redução de danos e no tratamento da dependência de nicotina. Revista Brasileira de Cancerologia, 64(4), 587–589. https://doi.org/10.32635/2176-9745.RBC.2018v64n4.210

13. Cervellione, K. L., Shah, A., Patel, M. C., Curiel Duran, L., Ullah, T., & Thurm, C. (2019). Alcohol and drug abuse resource utilization in the ICU. Substance Abuse: Research and Treatment, 13, 1-5. https://doi.org/10.1177/1178221819869327

14. Cordovilla-Guardia, S., Vilar-López, R., Lardelli-Claret, P., Navas, J. F., Guerrero-López, F., Fernández-Mondéjar, E. (2017). Ingreso en cuidados intensivos por un traumatismo relacionado con el consumo de alcohol o drogas, un «momento propicio de enseñanza» para el inicio del cambio. Enfermería Intensiva, 28(1), 4-12. https://doi.org/10.1016/j.enfi.2016.12.002

15. Favarin, S. S., & Camponogara, S. (2012). Perfil dos pacientes internados na unidade de terapia intensiva adulto de um hospital universitário. Revista de Enfermagem da UFSM, 2(2), 320-329. https://periodicos.ufsm.br/reufsm/article/view/5178/3913

16. Galvão, M. T. L., Santos, M. V. D. R., Brito, L. M., Evaristo, T. A. O., Sousa, E. L., Leitão, J. N. A. C., & Rocha, A. S. (2024). Hospitalizations for mental and behavioral disorders due to alcohol and other psychoactive substance use among adolescents in Brazil, 2017-2022. Epidemiologia e Serviços de Saúde, 33, e20231110. https://doi.org/10.1590/S2237-96222024V33E20231110.EN

17. Karir, V., Hough, C. L., Daniel, S., Caldwell, E., & Treggiari, M. M. (2012). Sedation practices in a cohort of critically ill patients receiving prolonged mechanical ventilation. Minerva Anestesiologica, 78(7), 801-809. https://www.minervamedica.it/en/journals/minerva-anestesiologica/article.php?cod=R02Y2012N07A0801

18. Kourouni, I., Mourad, B., Khouri, H., Shapiro, J. M., & Mathew, J. P. (2020). Critical illness secondary to synthetic cannabinoid ingestion. JAMA Network Open, 3(7), 1-11, e208516. https://doi.org/10.1001/jamanetworkopen.2020.8516

19. Lemos, Y. V., Wainstein, A. J. A., Savoi, L. M., Drummond-Lage, A. P. (2019). Epidemiological and toxicological profile of homicide victims in a legal medicine unit in Brazil. Journal of Forensic and Legal Medicine, 65, 55-60. https://doi.org/10.1016/j.jflm.2019.05.008

20. López-López, C., Arranz-Estevan, A., Martinez-Ureta, M. V., Sánchez-Rascón, M. C., Morales-Sánchez, C., & Chico-Fernández, M. (2018). Does a history of psychoactive substances abuse play a role in the level of pain of the patient with severe trauma? Enfermería Intensiva, 29(2), 64-71. https://doi.org/10.1016/j.enfi.2017.08.002

Revista ARACÊ
ISSN: 2358-2472

21. Marques, R., Petta, A. C., & Zaleski, M. (2011). Redução de danos: é possível utilizar essa estratégia terapêutica no Brasil? In A. Diehl, W. Q. Cordeiro, & R. Laranjeira (Orgs.), Dependência Química (pp. 341-344). Artmed.

22. Marshall, J. C., Bosco, L., Adhikari, N. K., Connolly, B., Diaz, J. V., Dorman, T., Fowler, R. A., Meyfroidt, G., Nakagawa, S., Pelosi, P., Vincent, J. L., Vollman, K., & Zimmerman, J. (2017). What is an intensive care unit? A report of the task force of the World Federation of Societies of Intensive and Critical Care Medicine. Journal of Critical Care, 37, 270-276. https://doi.org/10.1016/j.jcrc.2016.07.015

23. Brasil, Ministério da Saúde. (2018). Dados de morbimortalidade masculina no Brasil. Biblioteca Virtual em Saúde do Ministério da Saúde. https://bvsms.saude.gov.br/bvs/publicacoes/perfil_morbimortalidade_masculina_brasil.pdf

24. Nguyen, T. L., Boudemaghe, T., Leguelinel-Blache, G., Eiden, C., Kinowski, J. M., Le Manach, Y., Peyrière, H., & Landais, P. (2017). Identifying life-threatening admissions for drug dependence or abuse (ILIADDA): Derivation and validation of a model. Scientific Reports, 7, 44428. https://doi.org/10.1038/srep44428

25. Oliveira, R. S. C., Matias, J. C., Fernandes, C. A. O. R., Gavioli, A., Marangoni, S. R., & Assis, F. B. (2023). Hospitalizations for mental and behavioral disorders due to alcohol use in Brazil and regions: A temporal trend analysis, 2010-2020. Epidemiologia e Serviços de Saúde, 32(1), 1-9. https://doi.org/10.1590/S2237-96222023000100005

26. Organização Mundial da Saúde. (2024). Global status report on alcohol and health and treatment of substance use disorders. World Health Organization. https://www.who.int/publications/i/item/9789240096745

27. Pereira, G. B., & Oliveira, M. M. (2016). Internações em Unidade de Terapia Intensiva relacionadas ao uso abusivo de álcool, tabaco e drogas ilícitas. Vittalle-Revista de Ciências da Saúde, 28, 49-64. https://periodicos.furg.br/vittalle/article/view/6224

28. Pereira, G. B., Silveira, K. L., Borges, C. L. S., & Oliveira, M. M. (2020). Características clínicas de usuários abusivos de substâncias psicoativas internados em Unidade de Terapia Intensiva. SMAD, Revista Eletrônica Saúde Mental Álcool e Drogas, 16(2), 34-41. https://doi.org/10.11606/issn.1806-6976.smad.2020.158506

29. Perez, J. A., Rios, L. M. S., Merelles, S. L., & Duarte, M. B. (2020). Internações hospitalares por uso de substâncias psicoativas no Nordeste Brasileiro em 2018. Revista de Ciências Médicas e Biológicas, 19(3), 405-410. http://dx.doi.org/10.9771/cmbio.v19i3.36020

30. Pilon, S. C., Jora, N. P., & Santos, M. A. (2011). In A. Diehl, W. Q. Cordeiro, & R. Laranjeira (Orgs.), Dependência Química (pp. 453-460). Artmed.

31. Rodrigues, T. F. C. S., Oliveira, R. R., Decesaro, M. N., & Mathias, T. A. F. (2019). Aumento das internações por uso de drogas de abuso: destaque para mulheres e

Revista ARACÊ
ISSN: 2358-2472

idosos. Jornal Brasileiro de Psiquiatria, 68(2), 73–82. https://doi.org/10.1590/0047-2085000000230

32. Sandiumenge, A., Torrado, H., Muñoz, T., Alonso, M. Á., Jiménez, M. J., Alonso, J., Pardo, C., & Chamorro, C. (2016). Impact of harmful use of alcohol on the sedation of critical patients on mechanical ventilation: A multicentre prospective, observational study in 8 Spanish intensive care units. Medicina Intensiva, 40(4), 230–237. https://doi.org/10.1016/j.medin.2015.06.008

33. Santana, C. J., Hungaro, A. A., Christophoro, R., Elvira, I. D. K. S., Gavioli, A., & de Oliveira, M. L. F. (2020). Caracterização de pacientes intoxicados por drogas de abuso em terapia intensiva. SMAD, Revista Eletrônica Saúde Mental Álcool e Drogas, 16(1), 1-8. https://doi.org/10.11606/issn.1806-6976.smad.2020.151960

34. Santana, C. J., Gavioli, A., Oliveira, R. R., & Oliveira, M. L. F. (2022). Internações por álcool e outras drogas: tendências em uma década no estado do Paraná. Acta Paulista de Enfermagem, 35, 1-9. https://doi.org/10.37689/acta-ape/2022AO02637

35. Santana, C. J., Oliveira, M. L. F., Martins, E. A. P., Silva, A. S., Radovanovic, C. A. T., & Elvira, I. de K. S. (2023). Morbimortalidade e fatores associados ao óbito em internados por efeitos do álcool e outras drogas. Escola Anna Nery, 27, e20220171. https://doi.org/10.1590/2177-9465-EAN-2022-0171pt

36. Silva, C. J., & Miguel, A. Q. C. (2011). Intervenção breve e rede de atenção primária. In A. Diehl, W. Q. Cordeiro, & R. Laranjeira (Orgs.), Dependência Química: Intervenção breve (pp. 244-249). Artmed.

37. Silva, R. L., Borrego, A. L. S., & Figlie, N. B. (2011). Psicoterapia de grupo para dependentes químicos. In A. Diehl, W. Q. Cordeiro, & R. Laranjeira (Orgs.), Dependência Química (pp. 328-339). Artmed.

38. Tollisen, K. H., Bjerva, M., Hadley, C. L., Dahl, G. T., Högvall, L. M., Sandvik, L., Heyerdahl, F., & Jacobsen, D. (2019). Substance abuse-related admissions in a mixed Norwegian intensive care population. Acta Anaesthesiologica Scandinavica, 64(3), 329-337. https://doi.org/10.1111/aas.13506

39. Veloso, A. O. N., Keomma, K., Coutinho, M. S., & Cavalcanti, A. L. (2019). Caracterização de homicídios e aspectos associados ao uso de drogas ilícitas em uma Capital no Nordeste Brasileiro. ABCS Health Sciences, 44(3), 154-160. https://doi.org/10.7322/abcshs.v44i3.1203

40. Vendas, C., & Figlie, N. B. (2011). Entrevista motivacional. In A. Diehl, W. Q. Cordeiro, & R. Laranjeira (Orgs.), Dependência Química (pp. 242-275). Artmed.

41. Zanellatto, N. (2011). Terapia cognitivo-comportamental aplicada à dependência química. In A. Diehl, W. Q. Cordeiro, & R. Laranjeira (Orgs.), Dependência Química (pp. 253-265). Artmed.