



## Research Article

## Addiction among Health Care Professionals? What is the Current State of Nurses, Caregivers and Paramedics in 2022? A Review

Ammar Amirouche<sup>1\*</sup>, Hugo Felix<sup>1</sup>, Raphaël Serreau<sup>1</sup>, Philippe Denormandie<sup>2</sup>, Julia Fernandez<sup>2</sup>, Sarah Coscas<sup>1</sup>, Lisa Blecha<sup>1</sup>, Amine Benyamina<sup>1</sup>

### Abstract

**Background:** The COVID-19 pandemic has had a significant impact on organizations, health care professionals and of course patient care. The ability of health care facilities and their personnel to deliver safe, quality care was tested under particularly stressful conditions over the past two years. Health care workers represent a vulnerable population, especially during periods of high demand such as a major pandemic. This may in turn be associated with an increased risk of alcohol and substance use, abuse and disorders. There exists a correlation between psychotropic drug use and ensuing job difficulties increasing professional and emotional exhaustion among health care professionals.

**Aims and Objectives:** To describe the current state of nurses, caregivers and paramedics in terms of substance use, mental health and burnout after two years of the COVID-19 pandemic in France.

**Design:** Level exploration of health care professionals' addiction and burnout in France with PRISMA check-list.

**Method:** Review of the literature in Pubmed, Scholar, social data and website until October 15, 2022.

**Results:** Drug and alcohol misuse among healthcare workers is estimated to be between 10 and 15%. It has increased since the COVID-19 pandemic. Psychoactive substance misuse such as excessive alcohol consumption can lead to decreased efficacy and cognitive performance in the days following its use. Nurses may also be at an increased risk of opioid and benzodiazepine misuse compared to other populations of healthcare workers.

**Conclusions:** We need to examine the current situation concerning addictions and burnout among all healthcare professionals in France and around the world in order to determine optimal care management.

**Relevance to Clinical Practice:** This is a necessary step in order to improve screening and diagnosis of psychological distress among healthcare professionals in France particularly nurses, caregivers and paramedics.

**Keywords:** Addictions; Alcohol; Benzodiazepines; Burnout; Caregivers; Healthcare Professionals; Nurses; Paramedics; Psychotropic; Opioids

### Summary Boxes

1. Burnout is rising more and more dramatically in France in nurse's healthcare workers since the covid-19 epidemic.
2. We didn't find any published information about paramedic's burnout in Medline and in the grey literature.

### Affiliation:

<sup>1</sup>Unité de Recherche PSYCOMADD, APHP

Université Paris Saclay, France

<sup>2</sup>Fondation nehs, Tour de Lyon, Paris 12ème, France

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### \*Corresponding author:

Ammar Amirouche, APHP Université Paris Saclay, Unité de Recherche PSYCOMADD, (Psychiatrie Comorbidités Addictions) France

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- France needs to engage new research about burnout and addictions in these categories of healthcare workers.

## Background

### The Pre-Pandemic Situation

Addictions to psychoactive substances such as alcohol, tobacco, drugs or medications are frequent in healthcare workers. Behavioral addictions including work and to electronic media (Internet, social media,), gaming (both gambling and video games), sports and sex occur in all populations, including healthcare workers. Reports by the French Medical Council in 2008, and the French Congress of Medicine in 2013, have shown that physicians are vulnerable to addictions. Higher prevalences of burnout, suicide and alcoholism have been observed among physicians versus the general population [1]. Furthermore, nearly a quarter of all doctors (23%) declared they would not seek help for psychological distress and more than half (54%) would not know where to ask. Hospital practitioners rarely have any contact with occupational medicine services. They may fear being judged as incompetent or feel guilty of having failed to live up to the ideals of public service. Delays in diagnosis and care may lead to worsening symptoms, thus leading to worsened quality of care. The authors of this study on burnout among hospital doctors recommended regular contacts between practitioners and occupational medicine, with a specific approach including appropriate psychological support [2]. A large meta-analysis including 61 studies has shown a significant association between working hours and alcohol use. Individuals who work more than 48 hours per week (the maximum threshold in the European Union) have a 12% increased risk of engaging in risky drinking versus those working 35 to 40 hours per week. Associations between drinking and adverse working conditions including harassment, boredom, dissatisfaction, irregular, staggered or night shifts, security or safety positions, or physically demanding professions have been particularly well documented [3]. Among the general population, smokers increased their tobacco consumption during the pandemic. More than a third of regular smokers (36.2%), 9.3% of alcohol consumers and 13.2% of cannabis users reported their consumption increased due to work-related problems or their professional situation over the last twelve months. The reinforcement of these addictive practices appears significantly more important among the unemployed than among the employed. Addictive disorders shown in a survey among residents in surgery were around 40%. Another survey of more than 2,000 French interns between December 2016 and May 2017 focused on psychoactive substance use and mental health disorders. In this population of young adults (mean age 25.9 years ( $\pm 2.8$ )) with a minority of men (35%), interns in psychiatry had significantly greater rates of psychoactive substance use and mental disorders versus a comparable population. The

study showed nearly twice the rates of tobacco smoking, 50% greater alcohol use disorder and nearly three times the cannabis use disorder. They also showed significantly greater rates of psychedelic and stimulant use (ecstasy, mushrooms, amphetamines, LSD), between 1.5 to 2 times that of a comparable population. They were significantly more likely to report motives of shifting emotional states or coping with negative emotions including disinhibition, increased energy, decreased anxiety and sedation. They were also 2.5 times more likely to consult a psychiatrist and/or a psychologist, 3.5 times more likely to take antidepressants and nearly twice as likely to take anxiolytics. Many had been exposed to both sexual and physical abuse. This is the first study in France to examine addictive behaviors among medical interns. The results are quite troubling 12% of psychiatry interns believe they are dependent on cannabis versus 6% of other interns. One psychiatry intern in four occasionally or regularly uses ecstasy, versus one in five interns in other disciplines [4]. The COVID-19 pandemic has fostered a stressful environment that has tested healthcare professionals' competence and coping. As the situation continues, with the ensuing lack of material resources and relief, the risks of exhaustion and burnout have significantly increased. In parallel, professionals with prior vulnerabilities may attempt to cope with the situation by using psychoactive substances and other addictive behaviors. In order to counter this downward spiral, we must clearly examine the situation in order to propose solutions to heal the helpers to become more resilient to thus strengthen our healthcare systems.

### Design

Level exploration of prevalence of nurses' addictive disorders and burnout among the different categories of healthcare workers in France two years after the outbreak of the COVID-19 pandemic. PSYCOMADD laboratory performed a review of the literature targeting the prevalence of psychoactive substance use, addictive disorders, burnout, self-medication and sleeping disorders among the various categories of healthcare workers. It is also important to determine if gaps exist in the literature, especially among caregivers and paramedics.

### Method

A review of the literature was performed from October 2021 through mid-October 2022 using Pubmed, Scholar, medico-social websites data from scientific journals and general websites. We selected with a scoping review, papers from the journals using the keywords: addiction, burnout, sleeping disorders, and healthcare workers from scientific literature and grey literature. 227 articles were retrieved; 45 articles were obtained with keywords: nurses, caregivers and paramedics.

## Results

### Burnout

Burnout is increasing among physicians in France, this is associated with absenteeism, medical errors and suicidal ideation. Our review of the literature showed that up to 68% of doctors suffer from burnout, with almost 3 out of 10 showing symptoms of depression and 1 in 10 having suicidal ideations [5,6]. Burnout has been linked to 30% work-related accidents. The risk of suicidal ideation and behaviors in the context of burnout is nearly 60% greater in women doctors than in men. [7] (Musi *et al.* 2014) showed that among nursing staff in intensive care units, the prevalence of moderate-to-severe burnout is 49%. The risk of burnout significantly increased, 2.5 times higher, when relations with the hierarchy are poor. A similar prevalence rate was found among Tunisian healthcare workers in intensive care units. A majority of them were nurse anesthetists (57.95%). Almost without exception (94.71%) most of them had at least one symptom of a mental disorder and 4 out of 5 who had two symptoms [7].

### Self-Medication

Healthcare workers represent a profession that is particularly at risk of self-medication, especially with pain medications. Among doctors who misuse medications, 69% are male, have a history of self-prescribing and are coping with stress may lead to addictive behaviors. Overconfident attitudes towards medication prescriptions and their ability to control their personal use may further worsen addictive disorders. Self-medication may also represent an easy and effective solution to cope with stressful situations [8,9,10].

### Addictions: which substances? Which disciplines?

**Alcohol:** Alcohol abuse and dependence is a significant problem among US doctors, particularly surgeons. The primary substance used among these doctors was alcohol, with a prevalence of 15.3%, according to a survey published by [11] (Oreskovich *et al.* 2015). This prevalence may be even higher (18.3%) as shown in a more recent Danish study [12]. Self-medication with benzodiazepines, opiates, stimulants and tranquillizers were also regularly observed. In this population, the factors associated with alcohol misuse or dependence are younger age, short work experience, and being in a couple. On the contrary, the protective factors were the number of hours worked (one hour more each week) and having children. No significant differences were observed according to type of practice (private practice, hospital, clinic). However, certain specialties such as emergency physicians, anesthetists, surgeons, dermatologists, and psychiatrists were more affected were [11] (Oreskovich *et al.* 2015). In 2007, Baldisseri's team was able to show in a review of the literature that drug and alcohol misuse among healthcare workers was between 10 and 15% (similar to the general population). This

prevalence is worrying because healthcare professionals are responsible for the health and well-being of the general population. These behaviors may lead to decreased clinical skills and efficacy among health care workers. It has been shown that excessive alcohol consumption decreases surgical performance in the days following its use. The authors note that benzodiazepine and opiate use was more prevalent among health care workers than in the general population [13]. In a survey concerning addictions among French Student Anesthetist Nurses (University of Normandy 2018) shows that tobacco abuse seems to be higher than in the overall student and medical student population (36% vs 14% and 13% respectively). Vaping trends would seem to be similar, representing 12% of abuse among the student nurses versus 1% in the student population. On the other hand, alcohol abuse was lower among nurses than in overall students and medical student populations (14% vs. 21% and 30% respectively). Prevalence of cannabis use appear to be similar among all populations (nurses 6% vs. overall 7% and medical 8%). Very little reliable data exists concerning other substances like cocaine, amphetamines, hallucinogens, and solvents. Heavy binge drinking, which is now common among students, may partially explain this difference in the prevalence of alcohol consumption, as well as under-reporting by the nursing population [14].

**The Nurses:** Among nurses, prevalence of substance use varies between 6 and 20% according to the studies [15,16,17]. Several studies show that opiates are the most commonly used substances [18,19,20] whereas alcohol is the leading substance in others [16]. Differences were observed according to the healthcare specialty and practice site. Healthcare professional also have continuous access to medications because of their occupation. Difficult working conditions are another important factors that could explain self-medication and misuse. The COVID-19 pandemic has merely aggravated a pre-existing situation [15,9,8]. Other contributing environmental factors may gender inequality, work devaluation, and emotional strain [21,22]. Nurses are front-line healthcare workers in retirement homes as well as in hospitals. Each of these institutions were under significant strain prior to the pandemic. This may also explain why up to 20% of nurses are affected by addictions linked to burnout [15,16,23]. Female nurses are more affected than men nurses [24]. This stratified study, including 4438 nurses, showed an overall prevalence of addictions of 32%. Nurses working in pediatrics and in emergency departments had over three times higher cannabis, tobacco and alcohol consumption (OR =3.5 IC95% 1.5 - 8.2) than other nurses. Those working in psychiatry and oncology smoked tobacco over twice as much as other nurses, OR =2.4 CI95% 1.6 - 3.8 [25]. In another online study among nurses identifying as LGBTQ (n=394), they reported daily stress from work and easy access to their unit's pharmacy. (Assist v.3-1): The prevalence of substance use disorders was 74.1%, showing a significantly

higher association than non-LGBT nursing populations [26]. Few healthcare workers report substance misuse for fear of reprisals or feeling disloyal to their colleague [27]. As a result, it is estimated that less than 10% of nurses with an addictive disorder get adequate care [9]. Punitive policies and disciplinary measures have shown little to no efficacy. Other programs such as an Alternative to Discipline have been more successful, with a 75% increase in nurses presenting for care [23]. Most studies show similar uptakes between nurses and doctors. However, following an addictions care program, nurses would seem to have less after-care, work longer hours and remain more symptomatic than doctors. Moreover, sanctions were more frequent and severe [28]. A recent international meta-analysis published in 2021 by Gueijen & al. examined the efficacy of monitoring the treatment of addictions in health care workers. It showed relapse rates were very low compared to the general population (approximately 20% vs 40%) [29]. In a retrospective study among nearly 300 healthcare workers, risk factors associated with relapse following included a family history of substance disorders (OR = 2.29 IC95%: 1.44-3.64 p<0.001); psychiatric comorbidities (OR = 2.12 CI95%: 1.33-3.36 p<0.002) and major opioid use (OR = 5.79; CI95% : 2.89-11.42, p<0.001). The presence of more than 1 risk factor and a prior history of relapse further increased the risk of relapse [30]. Another study showed that alcohol use disorder is an independent risk factor for relapse, contrary to opioids [31]. In addition, the 2022 French AMADEUS survey of nearly 7000 health professionals paints a troubling picture of their state of health with 90% who are exposed to significant psychological stress, 50% to 60% having burnout, 31% to 49% with sleep disorders, 30% with depression. The use of psychoactive substances is also present, with a significant prevalence of alcohol use (16%) and regular use of hypnotics (21%) [32]. Finally, the AMADEUS findings suggest that prevention of burnout among healthcare professionals must be a priority, inviting us to develop and evaluate interventions to reduce the risk of addictive behaviors and to improve mental health in this population [32]. There also seems to be a direct statistical association between burnout in health workers and workload as well as responsibilities. Addictions may represent a sort of "crutch" to keep up with the pace and are all the more present when sleep is deteriorated. Conversely, reduced levels of occupational stress and better quality of work life are associated with reduced turnover rates [33-45]. These findings may help us to design better workplace interventions to prevent burnout and other subsequent mental health issues including addictive disorders.

## Conclusion

Burnout in healthcare workers is a significant public health issue that has not been given enough attention in France, especially among nurses, the caregivers and paramedics. Thus

it is important that we better study and analyze the situation in order to find feasible and effective solutions. Alcohol and opioid use rates are rising among paramedical, dental and medical students, namely cannabis, tobaccos, which seem to be increasing exponentially. Publication of clinical studies on nurses, nursing aides and paramedical personnel are sorely needed since they remain an understudied population in the current literature, which has mainly focused primarily on doctors. Prospective studies should be carried out in France to document more precisely the relationships between burnout and addictive behaviors in order to raise awareness and design preventive actions. Based on the current literature, actions designed to reduce unnecessary workplace stress including better relations between workers and management; closer contacts and support from occupational physicians; as well as building care and peer support networks for healthcare workers would also help to break the isolation of healthcare workers and free up their voices.

## Patients and Public Contributions

No patients or Public contributions, we have chosen to use only bibliographical review. It was not necessary in a first time to include patients to have preliminary data about the situation of burnout among healthcare professionals in France. In a second time we will perform a prospective study including particularly caregivers and paramedics to obtain the lacking information about these class of healthcare professionals.

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