

Addiction and Psychiatric Comorbidities: About 50 Cases Followed in the Addictology and Mental Hygiene Department of Abidjan (Ivory Coast)

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Abstract

Background: Comorbidities between psychiatric disorders and substance use disorders is increasingly encountered in psychiatric settings. The aim of this study was to investigate comorbidity between psychiatric disorders and substance abuse. **Methods:** This was a descriptive cross-sectional study conducted from June to August 2020 at the Addictology and Mental Hygiene Service (SAHM) of the National Institute of Public Health (INSP) in Abidjan. Data were analyzed using Word and Excel version 2016 software. **Results:** Our respondents were male, aged between 20 and 30 (58%), single (92%), and 36% of them were pupils or students. Sixty percent of the subjects had a psychiatric history, and the psychiatric disorders comorbid with the psychoactive substance addictions identified were schizophrenia (28%), bipolar disorder (26%), and anxiety disorders (24%). The psychoactive substances used in association with psychiatric disorders were cannabis (43%), benzodiazepines (31%), and opiates (14%), which were smoked (96%) at a frequency of three times a week in 64% of cases. The effects sought by respondents were soothing and well-being (59.78%). Schizophrenia associated with cannabis addiction was the most frequently identified comorbidity with substance abuse and psychiatric disorders. **Conclusion:** The frequency of comorbid substance addiction and psychiatric disorders invites practitioners to systematically search for psychiatric disorders in all users of psychoactive substances and vice versa.

Keywords

Comorbidity, Psychiatric Disorders, Addiction, Drugs, Abidjan

1. Introduction

Substance addiction describes the more or less alienating relationship of dependence that an individual establishes with a product (alcohol, tobacco, or drugs). It is characterized by the repeated impossibility of controlling a behavior pursued despite knowledge of its negative consequences. The behavior is aimed at producing pleasure or warding off a feeling of internal discomfort [1].

In 2020, an estimated 284 million people aged 15 to 64 had used a drug in the past 12 months (5.6% of the age group), an increase of 26% from 2010, attributed in part to the increase in the world's population [2].

Africa is no exception to the observed increase in the consumption of psychoactive substances. Cannabis remains the most widely used illicit drug in this part of the world, followed by amphetamine-type stimulants [3] [4]. In a study carried out in Yaoundé, Mbongo'o GC *et al.* [5] found that 72.4% of smokers used tobacco, 72.4% smoked cannabis, 79.3% used alcoholic beverages, and 50.5% used tramadol.

In Côte d'Ivoire, Ahounou EI *et al.* [6] found cannabis (52.9%), tramadol (16.7%), benzodiazepines (15.8%), and heroin (15.4%) among adolescent drug users consulting the Abidjan addictology and mental hygiene service for the first time in 2019.

The use of psychoactive substances is often associated with psychiatric disorders, resulting in a high incidence of comorbid substance use and psychiatric disorders [7].

The epidemiological studies National Epidemiologic Survey on Alcohol and Related Conditions Study (NESARC) and Epidemiologic Catchment Area (ECA) have shown this co-occurrence of addictive disorders and psychiatric disorders, with anxiety disorders, depressive disorders, bipolar disorders, psychotic disorders, and personality disorders being prevalent psychiatric pathologies. According to the same study, cited by Derveaux A., the frequency of cannabis use among depressive patients was 48%, and 43.3% among those with an anxiety disorder in the twelve months prior to the NESARC work. Among schizophrenics, tobacco, alcohol, and cannabis were comorbid substances [8].

In Cameroon, a study carried out at the Jamot Hospital in Yaoundé on the socio-demographic profile and comorbidities of users in addictionology consultations revealed a prevalence of 72.4% for cannabis [5]. Doukouré *et al.*, in their work in Conakry, Guinea, reported 46.84% of cases of comorbidity between addiction to psychoactive substances and mental disorders [9]. Conde *et al.*, in the psychiatry department of the Donka CHU national hospital in Conakry, Guinea, noted that more than half, 52.4%, of adolescents had mood disorders associated with addictive behaviours, compared with 30.9% with psychotic disorders [10].

Half of addicts have a history of psychiatric disorders, just as half of patients with psychiatric disorders have a history of addiction. Whether we are talking about comorbidity or co-occurrence, the proximity of addictology and psychiatry is obvious. In fact, you only have to work in a psychiatric ward for this reality to

be obvious. Some even claim that it is in local psychiatric wards that the bulk of care for addicts is provided on a daily basis [11]. Compared to people with a single disorder, patients with comorbid mental health and substance abuse present a higher psychopathological severity, with more hospitalizations, an increased risk of suicide, and higher rates of HIV and hepatitis C infection, as well as psychosocial disorders, including criminal behavior [12].

In Côte d'Ivoire, most studies have focused on descriptive epidemiological aspects, toxicological profiles of drug users, and the consequences of alcohol, tobacco, and drugs. Few published studies have addressed the problem of comorbidity between addiction to psychoactive substances and psychiatric disorders. A legitimate question, therefore, is: what are the comorbid addictions and psychopathological disorders in the Ivorian context? Answering this question led us to undertake this study on: "Addiction and psychiatric comorbidities in 50 patients followed at the Abidjan Addictology and Mental Hygiene Department." Far from proving the imputability of addiction to illicit drugs in psychiatric disorders, our aim in this study was to draw up a list of the most frequent psychiatric disorders in dual diagnoses, as well as the psychoactive substances most frequently implicated.

2. Methodology

This study was carried out at the Service d'Addictologie et d'Hygiène Mentale (SAHM) of the Institut National de Santé Publique (INSP). This is an outpatient department which cares for patients with a psychiatric disorder and/or a substance use disorder (SUD). Our study focused on drug users with psychiatric disorders who consulted the SAHM of the INSP in Abidjan. Our study included patients over 15 years of age, regularly monitored (at least 60% of appointments honoured at the SAHM) for both a psychiatric disorder and a substance use disorder as assessed by a urine toxicology test carried out at the SAHM. Patients who were unstable (agitated, delirious, unable to answer the questionnaire) or who had a medical file that could not be used (medical file with at least one piece of socio-demographic or clinical data missing) or those who did not agree to take part in the study were not included.

This was a descriptive cross-sectional study. The study survey lasted for 2 months, from July to August 2020. The study period spanned the year 2019.

We proceeded with exhaustive sampling, taking into account the inclusion criteria listed above. Thus, 50 patients were selected for our study.

The data were collected using patients' medical records (containing urine toxicology analyses) and a survey form. This method made it possible to collect essential data on socio-demographic characteristics (age, sex, occupation), psychopathological characteristics (psychiatric history, psychiatric disorders), and addictological characteristics (age of first use, duration of substance use, frequency of use, route of administration, mode of use, desired effects, and substances used).

The survey was carried out in compliance with the ethical clauses governing the

practice of medicine and the rules of medical deontology in force in Côte d'Ivoire. Patients' anonymity was respected, as was the confidentiality of the information gathered.

The data collected were manually analyzed and processed using Word and Excel version 2016 software.

3. Results

Socio-demographic characteristics:

Almost all the patients surveyed (96%) were male, with more than half (58%) aged between 20 and 30. Many patients surveyed were pupils/students (36%), followed by the unemployed (30%) (**Table 1**).

Table 1. Distribution of respondents by age, gender, and profession.

Parameters	Number	Percent
Age (years)	n = 50	%
<20	04	08
20 - 30	29	58
31 - 40	13	26
≥41	04	08
Gender	n = 50	%
Male	48	96
Female	02	04
Socioprofessional/activities	n = 50	%
Pupils/students	18	36
Formal sector workers	04	08
Informal sector workers	13	26
Unemployed	15	30

Clinical characteristics:

More than half of the patients (52%) had a personal psychiatric history of brief psychotic disorder (53.85%), bipolar disorder (26.92%), and anxiety disorder (19.23%). The most common diagnoses were schizophrenia (28%), bipolar disorder (26%), and anxiety disorders (24%) (**Table 2**).

Clinical data on drug use:

Sixty-six percent of respondents had been using psychoactive substances for 1 to 3 years, with a frequency of use of three (3) times a week in 64% of cases. Smoking or inhalation was the main route of drug administration (96%). The majority of patients (60%) used psychoactive substances alone, with soothing or well-being being the main effect sought in 60% of cases. Cannabis, benzodiazepines, and opiates were the most commonly used illicit psychoactive substances.

Table 2. Distribution of respondents by history and psychopathological diagnosis.

Parameters	Number	Percent
Presence of personal psychiatric history	n = 50	%
yes	26	52
No	24	48
Types of personal psychiatric history	n = 26	%
Anxiety disorders	05	19.23
Brief psychotic disorder	14	53.85
Bipolar disorder	07	26.92
Psychopathological diagnoses	n = 50	%
Schizophrenia	14	28
Bipolar disorder	13	26
Anxiety disorder	12	24
Chronic hallucinatory psychosis	03	06
Psychopathic personality	05	10
Bordeline personality	03	06

Table 3. Clinical aspects of drug use.

Parameters	Number	Percent
Length of use (years)	n = 50	%
1 - 3	33	66
4 - 6	12	24
7 - 9	03	06
≥10	02	04
Frequency of use per week	n = 50	%
2	05	10
3	32	64
4	09	18
≥5	04	08
Method of administration	n = 50	%
Smoked	48	96
Snorted	02	04
Mode of consumption	n = 50	%
In a group	20	40
Alone	30	60
Effects sought	n = 50	%
Soothing/well-being	30	60

Continued

Forgetting difficulties	09	18
Euphoria/conviviality	09	18
Intellectual performance	02	04
Substances consumed	Frequency	%
Cannabis	43	86
Opiates	14	28
Cocaine	04	08
Benzodiazepines	31	62
Amphetamines	02	04
Methamphetamines	02	04
Barbiturates	02	04

Addiction-psychiatric disorder comorbidity:

Cannabis, benzodiazepines, and opiates were the comorbid psychoactive substances regardless of psychiatric disorder.

Table 4. Distribution of psychiatric disorders according to psychoactive substances found in urine.

Psychopathological diagnoses	Substances found in urine	Frequency	Percent %
Borderline personality	Cannabis	1	33.33
	Benzodiazepines	1	33.33
	Opiates	1	33.33
Bipolar disorder	Methamphetamine	1	07.69
	Cannabis	11	84.61
	Benzodiazepines	8	61.53
	Opiates	2	15.38
PHC	Cannabis	3	50
	Benzodiazepines	1	33.33
	Opiates	2	16.67
Schizophrenia	Benzodiazepine	9	64.28
	Cannabis	12	85.71
	Cocaine	1	07.14
	Barbiturates	1	07.14
	Opiacés	6	42.85
	Amphetamine	1	08.33
Anxiety disorder /PSPT	Cannabis	11	91.67

Continued

	Benzodiazepines	11	91.67
	Barbiturates	1	08.33
	Methamphetamine	1	08.33
	Opiates	2	16.67
	Cannabis	5	100
	Benzodiazepines	1	20
Psychopathic personality	Amphetamine	1	20
	Cocaine	3	60
	Opiates	2	40

4. Discussion**Socio-demographic characteristics:**

The majority of our patients (66%) were aged less than or equal to 30 years, with 58% in the 20 - 30 age bracket. These results are similar to those of Mbassa D. *et al.* [13] in Yaoundé, who noted that in a population of patients followed at the Jamot psychiatric hospital in Yaoundé, 75% of patients aged under 30 used psychoactive substances. The same observation was made by Li X. *et al.* [14] among African-Americans in the United States, and they explained it by the fact that young people in general, and adolescents in particular, are in search of affirmation or thrills and risk-taking.

Over three-quarters of those surveyed (96%) were men. These results are superimposed on those of Mbongo'o GC *et al.*, who found 96% men in their study on "Socio-demographic profiles and comorbidities of users in addictionology consultations in Yaoundé" [5].

In France, Guillem E. [15] noted a male/female sex ratio of 2. This high male representation is the result of a society in which the use of psychoactive substances is seen as a sign of male virility [14]. In an African society where women are seen as mothers and educators, the simple use of legal substances (tobacco and alcohol) by women is very poorly perceived, let alone the use of drugs.

Over a third of those surveyed were pupils and students (36%), followed by the unemployed (30%). In their study entitled "Profil toxicologique des patients usagers de drogues suivis au service d'addictologie et d'hygiène mentale d'Abidjan: Bilan d'une année d'activité de dépistage (janvier à décembre 2016)", Traoré *et al.* found that more than a third were students (38.89%), followed by workers in the informal sector (27.78%) [16]. Contrary to our data, Laporte A. and Chauvin P. noted 45.2% unemployed and 3.2% students among people without personal housing in Ile-de-France [17].

Psychopathological aspects

52% of our patients had a personal psychiatric history, mainly of brief psychotic disorder (BPD), bipolar disorder, and anxiety disorder in 53.85%, 26.92%, and

19.23% of cases, respectively. Zian C. [12] in a similar study noted that 55.85% of personal psychiatric antecedents were depression (44.25%), bipolar disorder (25.19%), and anxiety disorder (23.40%).

The most frequently diagnosed psychiatric disorders among our respondents were schizophrenia (28%), bipolar disorders (26%), and anxiety disorders (24%). Our results are in line with those of Moghaddam *et al.* [18], who also found anxiety disorders, bipolar disorder, and schizophrenia to be comorbid disorders among American nicotine addicts.

Substance use clinic:

The majority of patients (66%) had been using drugs for 3 years. This result was far superior to that of Zian C. [12], who noted less than a third of patients (26, 57%) with a duration of drug use of 3 to 5 years.

Frequency of use was three (3) times a week in 64% of cases, and four (4) times a week in 18%. This reflects the regular, almost daily use of psychoactive substances, which indicates dependence and may contribute to the onset or aggravation of psychiatric disorders.

Almost all patients (96%) smoked illicit substances, while 4% sniffed them. Ahounou EI *et al.*, in their study “Dynamique d’usage de substances psychoactives” Extra-Intra-Muros “chez les détenus mineurs à Abidjan (Côte d’Ivoire),” found that minors smoked and sniffed illicit substances in 96% and 3.08% of cases, respectively [19].

This mode of use can be explained by the availability of illicit substances for smoking or sniffing in the Ivorian market.

The drug was taken alone by the participants in our study (60%), with the desired effects being soothing/well-being (59.78%), forgetting difficulties (18.48%), and euphoria/conviviality (18.48%). Zian C. [12] found in his study that the effects sought by drug users were euphoria (44.43%), relaxation (23.14%), and forgetting difficulties (18.38%), but with group consumption in 69.14% of cases.

Cannabis was the most commonly used substance in 86% of cases, followed by benzodiazepines (62%) and opiates (28%). Ahounou *et al.*, in their study “Les conduites addictives des adolescents usagers de drogues consultant pour la première fois au service d’addictologie et d’hygiène mentale d’Abidjan en 2019,” identified cannabis (54.76%), followed by benzodiazepines (19.13%) and opiates (15.65%), as the substances most commonly used by adolescents [6]. The predominance of cannabis, benzodiazepines, and opiates was also reported among drug users in the 2016 study by Traoré *et al.* [16].

In France, cannabis remains the most widely consumed illicit substance, with 1.2 million regular users (at least ten uses in a month) in 2016 [20].

This high proportion of cannabis users could be explained by its geographical accessibility (the most widely sold drug, often grown in our tropics) and financial accessibility (its relatively low cost, sold in the form of resin, oil, or herb at prices ranging from 100 to 500 FCFA, or 0.15 to 0.77 Euro). Also, for many users, cannabis is perceived as relatively harmless and considered a much more natural sub-

stance that should not be considered a drug [16].

The positive social perception or trivialization of a substance such as cannabis or alcohol can encourage its use [21].

Addiction-psychiatric disorder comorbidity:

Cannabis was the main illicit psychoactive substance most commonly comorbid with various diagnosed psychiatric disorders.

For patients with schizophrenia as a psychiatric comorbidity, cannabis (41.38%), benzodiazepines (31.03%), and opiates (20.69%) were found to be addictive disorders. Thomas *et al.* [22] had established a relationship between schizophrenia and cannabis use, which is the illicit substance most commonly consumed by patients with schizophrenia. These particular links are supported by two complementary hypotheses, namely “self-medication” and “damage.” Both agree that cannabis use interacts with vulnerability factors in schizophrenia.

The prospective Danish study by Arendt *et al.* (2008) (cited by Tefahi B *et al.* [23]) on the outcome of cannabis-induced psychotic disorders showed that almost half of them were subsequently diagnosed with a schizophrenic disorder (mean follow-up: 6 years).

Cannabis and benzodiazepines were the psychoactive substances most commonly used by patients with bipolar disorder or anxiety disorder as a psychiatric comorbidity.

Among patients with anxiety disorders, cannabis, benzodiazepines, and opiates were the most prevalent substances used. The National Epidemiologic Survey and Alcohol and Related Conditions Study (NESARC) epidemiological studies carried out in the United States in 2007 showed cannabis dependence in 43.5% of cases over 12 months, and opiate dependence (especially heroin) in 45% of cases over a lifetime in subjects with anxiety disorders [8].

Cannabis and cocaine addiction were more prevalent in psychopathic or anti-social personalities. Consumption of these substances promotes disinhibition in psychopathic subjects, leading to aggressive and forensic acts, especially when combined with benzodiazepines [8].

5. Conclusions

The use of psychoactive substances is increasing in Côte d’Ivoire, leading to severe addictions with social and mental consequences. Psychiatric disorders associated with illicit drug use are increasing.

This study, which was carried out at the Abidjan Addictology and Mental Hygiene Service, examined the comorbidity of substance addiction and psychiatric disorders in relation to the addictive behaviours observed in the subjects it treated. It employed a quantitative approach, with a sample of 50 subjects.

At the end of this work, we note that the comorbidity of substance use disorders and psychiatric disorders was frequent in young, male subjects who were pupils/students or unemployed.

We note that schizophrenia, bipolar disorder, and anxiety disorders were the

psychiatric comorbidities most frequently diagnosed in these patients.

The most frequently used substances were cannabis, benzodiazepines, and opiates. The most frequently identified comorbidity between addiction and psychiatric disorders was schizophrenia associated with cannabis addiction.

These results suggest that practitioners should systematically look for psychiatric disorders in drug users, and vice versa. We therefore need to conduct a scientific study of the situation in order to identify ways of preventing and providing appropriate care for these patients.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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