



# RECREATIONAL DRUG USE IN ALGERIA: A SHORT COHORT STUDY

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## ABSTRACT

*In the Middle East and worldwide, drug abuse is a growing problem for authorities Defined as the ingestion of substance for their psychoactive effect .it's a main reason for cardiovascular neuronal avoidable comorbidities The aim of this study is to settle the prevalence of "Recreational drug" (RD) and the tendency of consumption*

**METHOD:** *We analyzed the data of 40 cases that came to the medical and surgery emergency department units in 03 months starting from July,1<sup>st</sup> 2023*

*The data were analyzed by IBM SPSS*

**RESULTS:** *Among the 40 included cases, 7 were female. The median age was 30 years. The patient presented at night (20:00– 07:59) in 25 cases, and during the weekend in19 cases (47.5%). The average length of stay is 57h34 minutes. The drugs most commonly involved were Cocaine 35.5% followed by buprenorphine 27.5% and pregabalin 22.5% then cannabis 17.5% Drugs were combined with other toxic agents in 20 cases (50%) to cocaine In 3 cases, the patient died during his hospitalization (7.5%) 8 cases (20%) required naloxone use*

**CONCLUSION:** *The trend of drug consumption is different from the European model. Cocaine is 35.5%*

**KEY-WORDS:** *Recreational drug use, intoxication, emergency medical department, prevalence, North Africa, substance abuse*

## INTRODUCTION

*"Recreational drug" refers to the use of drugs that are not intended for medical reasons but for its psychoactive nature and leisure. These drugs can be synthetic or naturally available (1) such as: Opioids, analgesics, benzodiazepines, antidepressants, cannabinoids, cocaine, and amphetamines...*

The use of drugs for recreational purposes is a burdensome public health issue, especially in the young adult's population (2).

In 2021, around 275 million people worldwide used recreational drugs (3).

In 2020, "the national office against drugs and toxicomania" (ONLCDT) identified 21638 cases of drug abuse in Algeria: 4.30% Aged under 15-year-old, 46.20% between 16 et 25-year-old, and 34.86% between 25 et 35-year-old.

The global deaths due to it increased by 60% from 105,000 deaths (2000) to 168,000 deaths (2018) (4)

The chronic consumption of those substances can lead to an avoidable increasing mortality and morbidity such as e neurotoxicity (5), acute cardiovascular events (sudden death, acute coronary syndrome, acute heart failure, thromboembolic events, myocarditis, and cardiac arrhythmias) (6.7) addiction, mental health issues and disorder, accidents, involvement in criminal activity and risky sexual behaviors (8.9.10.11.12.13)...

However, the RD consumption is underestimated, the prevalence and actual trend in Algeria are unknown ...

## METHOD

### SEARCH METHODS

Articles were identified through a literature search using Pub-med,

Keywords and synonyms of the following common categories of recreational drugs, prevalence of illicit drugs, complication and recreational drug



Studies were included if they were full-text journal or full articles, were published in English language peer-reviewed journal, published in the last 10 years

### **STUDIED POPULATION**

It is a retrospective study analyzing case-series of patients under recreational drug (the notion of toxic agent ingestion earlier or a positive analytic test) that were registered in one of the units of the medical and surgery emergency department units in “Lamine Debaghine” university hospital center Bab El Oued from July 1<sup>st</sup>,2023 to September 30<sup>th</sup>,2023.

### **DATA COLLECTION**

We registered gender, age, toxic agents taken, whether The patient was brought by ambulance, length of stay, time, and day of presentation, analytical test, ingestion of ethanol, treatment given, administration of naloxone, disposition from the outpatient clinic or hospital emergency department (admitted critical care unit, admitted psychiatric ward, admitted other hospital unit, medically discharged, or self-discharge), and whether the patient died or is alive.

Data was collected from the local registers of the medical and surgery emergency department units : consultation boxes, observation ward, intensive care unit, surgery emergency boxes, and the hospitalization ward

### **STATISTICAL ANALYZES**

All analyses and figures were done in IBM SPSS version 25. As more than one toxic agent was taken in.

In many cases, one case may be counted in several categories of prescription drugs.

Hence, there are overlaps between the categories, and they are not independent of each other for statistical purposes. Consequently, descriptions are presented, using the number of cases, percentages for categorical variables.

### **RESULTS**

There were 40 cases of acute poisoning related to recreational drug use during the 92 days of inclusion.

The patient was brought by ambulance in only 22.5% of cases (fig 3).

The patient presented at night (20:00– 07:59) in 25 cases, and during the weekend in 19 cases (47.5%)

The proportion of patients using drugs for recreational purpose varied by age. The median age is 30 years (15% aged between 17–21 years, 20% aged between 22–26 years, 25% aged between 27–31 years, 22.5% aged between 32–36 years and 15% were 39 years-old and more) by gender (In 7 cases (17.5%) The patient is a woman).

Analytical tests on urinal or blood samples were run in 29 of the cases (72.5 %) in the other cases (27.5%) they either came to the Emergency department with the toxic or reported the substance themselves.

Over 50% of the patients stayed between 7–15 hours in the Emergency department. The average length of stay is 57h34 minutes.

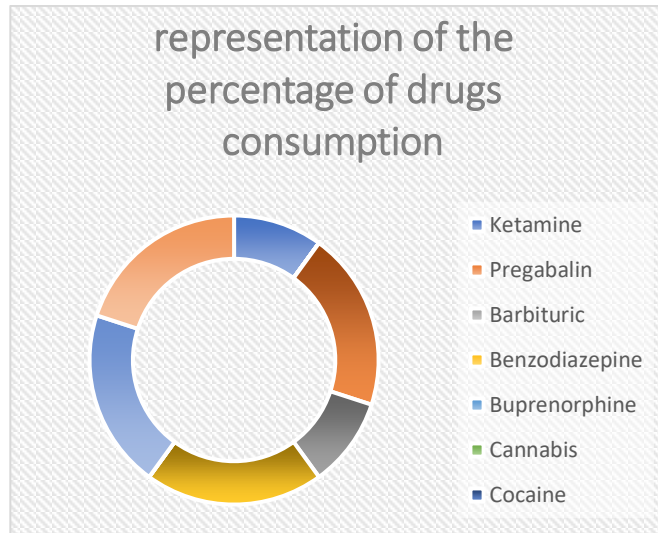
From the outpatient clinic 50% were medically discharged, 12.5% self-discharged, 7.5% died, 7.5% transferred to psychiatric ward, only 5% admitted to the ICU and 5% were taken to other wards

In 3 cases, the patient died during his hospitalization (7.5%)

Cocaine was the most frequent drug taken 35.5% followed by buprenorphine 27.5% and pregabalin 22.5% then cannabis 17.5% (tab 1)

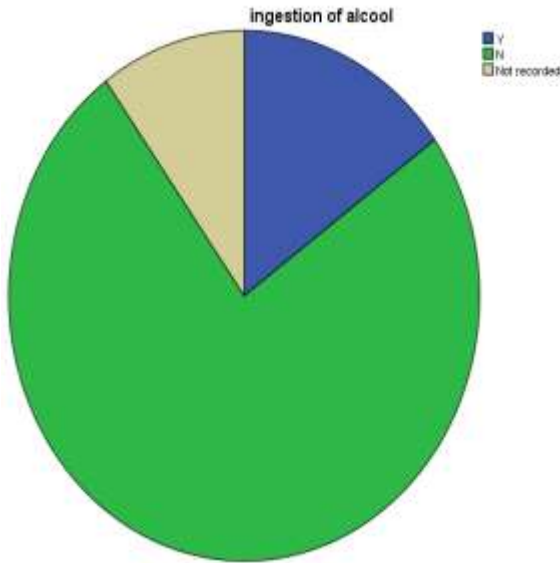
Drugs were combined with other toxic agents in 20 cases (50%). About 14 associations were with cocaine (5 cases of buprenorphine, 4 with cannabis...) (fig 4)

85 % were given treatment and put in observation. About 8 cases (20%) naloxone was given.

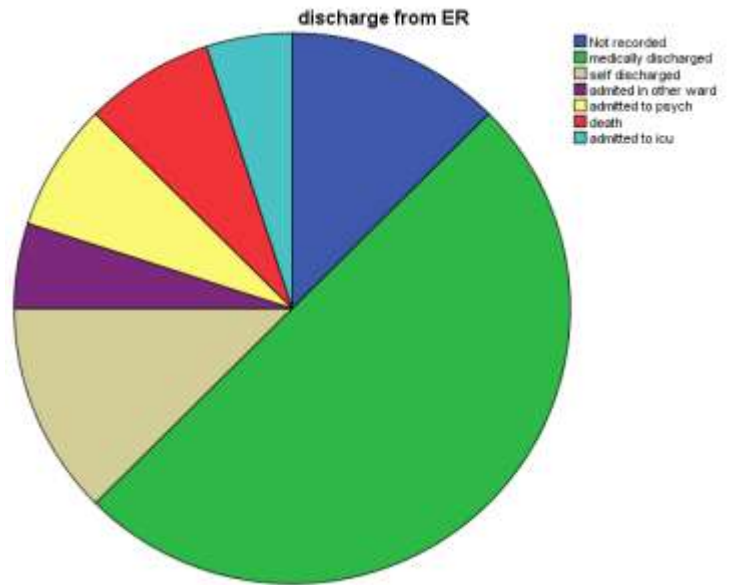


	%	Average	Standard deviation
<i>Ketamine</i>	5	1,95	,221
<i>Pregabalin</i>	22.5	1,78	,423
<i>Barbituric</i>	2.5	1,97	,158
<i>Benzodiazepine</i>	17.5	1,82	,385
<i>Buprenorphine</i>	27.5	1,73	,452
<i>Cannabis</i>	17.5	1,82	,385
<i>Cocaine</i>	35.5	1,65	,483
<i>Ecstasy</i>	10	1,90	,304
<i>Lexomyl</i>	5	1,95	,221
<i>Haloperidol</i>	10	1,90	,304
<i>Mianserine</i>	2.5	1,97	,158
<i>THC</i>	2.5	1,97	,158
<i>Gabapentin</i>	10	1,90	,304
<i>Tramadol</i>	10	1,90	,304

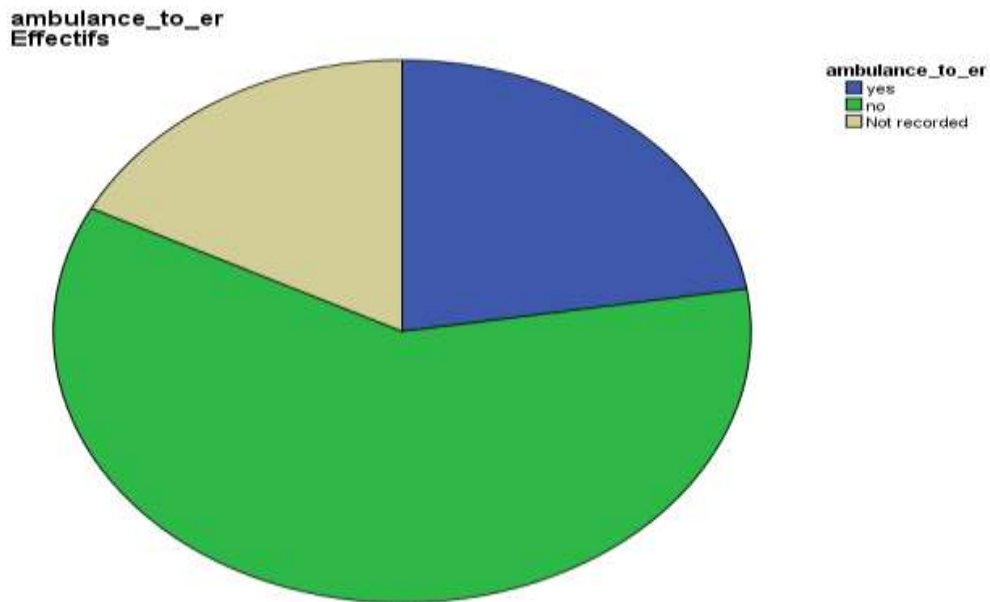
**Tab 1: Percentage and Standards Deviation of Toxic in the cases**



*Fig 1: Co Ingestion of Ethanol and Recreational Drugs*



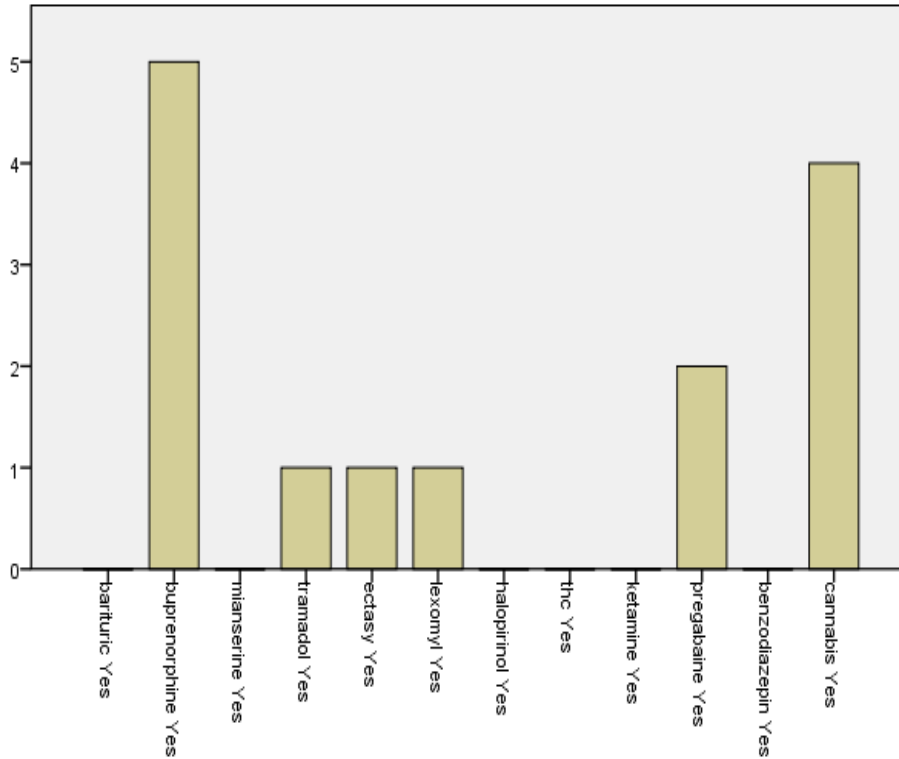
*Fig 2 : Discharges Modality*



*Fig 3: Transportation Modality to the Emergency Departmen*



**cocaine Yes Effectif**



	<i>Cocaine</i>
<i>Barbituric</i>	<i>0</i>
<i>Buprenorphine</i>	<i>5</i>
<i>Mianserine</i>	<i>0</i>
<i>Tramadol</i>	<i>1</i>
<i>Ecstasy</i>	<i>1</i>
<i>Lexomyl</i>	<i>1</i>
<i>Haloperidol</i>	<i>0</i>
<i>THC</i>	<i>0</i>
<i>Ketamine</i>	<i>0</i>
<i>Pregabalin</i>	<i>2</i>
<i>Benzodiazepine</i>	<i>0</i>
<i>Cannabis</i>	<i>4</i>

**Fig 4 : Comparison of the number of cases of Co-Ingestion of Cocaine and other Recreational Drugs**

**DISCUSSION**

**Summary of Main Findings**

The drugs most commonly involved were Cocaine 35.5% followed by buprenorphine 27.5% and pregabalin 22.5%, then cannabis and benzodiazepine 17.5%.

Drugs were combined with other toxic agents in 20 cases (50%) to cocaine

In 3 cases, the patient died during his hospitalization (7.5%)

8 cases (20%) required naloxone use

**Opioids**

Buprenorphine is an opioid and the second most used substance in our study after cocaine (27.5%). Opioids were also the second most frequent class of prescription drug reported, in line with European studies (16)

**Cannabinoids**

Cannabinoids are a chemical compound with the chief pharmacologically active delta 9 -tetrahydrocannabinol (THC). THC is a depressant of the central nervous system. It can cause numerous problematics.

Effects such as dizziness, confusion, hallucinations, speech and vision problems, ataxia, euphoria, lack of strength, and fatigue (14)

In our study, it represents only 2.5%



### **Cocaine**

Cocaine has numerous effects as a CNS stimulant, including insomnia, euphoria, Fatigue, dyskinetic, dizziness, tremors, and dysphoria, Tiredness, depression, and insomnia (15)  
In our study, it's the most common drug used 35.5%, in European studies it's about 11% (18)

### **Ecstasy**

Restlessness, disorientation, agitation, nervousness, insomnia, tremor, agitation, dizziness, euphoria, fast speech, staggering, dyskinesia, and dysphoria in users. Prolonged use can lead to changes in personality, psychosis, and hyperactivity (16)  
In the European society, 8.5% (18) versus 10% of the cases in our study

### **Benzodiazepine**

Third most consummate drug in our study, 17.5%  
In European studies 2.5% of the cases, and it's the most frequent drug (18)

### **Ketamine**

In our study, represented 5% of cases, in a European multi-center study of recreational drug toxicity, ketamine was reported in 2.3% of cases (18)

### **Other drugs**

In addition to cocaine, cannabis, and opioids, smaller numbers of other prescription drugs also appeared; Pregabalin and gabapentin, used for neuralgia and as antiepileptics, an antipsychotic and antidepressant have been previously reported in many studies (17) that suggested a growing trend of gabapentin abuse. In our study, pregabalin is the third place of most commonly used drug represented 22.5% cases and gabapentin 10% cases.

### **Limit of the study**

This study has some limitations.  
First, the mean burden of missing data on all the variables collected  
Second, the population was limited to babe l Oued and only for 3 months.  
Then, urine tests at admission detected only recent recreational drug use with a risk of underestimating recreational drug use several days or weeks before  
The dataset is based on patient self-reporting of the drugs used and/or the physician's interpretation of the clinical features.

### **Conclusion**

The trend of drug consumption is different from the European model. Cocaine is the most taken, especially associated with others. However, we can't explain the difference of tendencies between European and our study.

Furthermore, the high use of drugs like pregabalin and gabapentin must under-go a strict checking in order to avoid events like the US opioid epidemic

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