

## Cannabis addiction of adolescents in the Psychiatric Unit Care of Analankinina Toamasina Hospital in 2021

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### Abstract

**Introduction:** Nowadays, cannabis consumption is observed as a real social phenomenon in Toamasina Madagascar. The objective of the study is to determine the epidemiological and clinical profile of cannabis addiction in adolescents hospitalized in the Psychiatry Department of Analankinina Toamasina Madagascar Hospital.

**Methodology:** This is a retrospective descriptive study using anonymous and confidential personal questionnaires. Were included hospitalized adolescents in the Psychiatry Department during the year 2021, declared to have a past of taking cannabis and presenting psychiatric disorders? The socio-demographic parameters, the clinical manifestations of psychiatric disorders, the personality traits and the level of cannabis dependence according to the DSM-5 were studied.

**Results:** The cases of 35 patients corresponding to the inclusion criteria were studied. The male was predominant in  $n = 24$  or 68.57%. The adolescents between 15 and 18 years old presented more troubles in  $n = 29$  or 82.86%. Teenagers with a school break at college level were the most represented in  $n = 15$  or 42.86%, followed by high school students in  $n = 10$  or 28.57%. The majority of adolescents had married parents in  $n = 20$  or 57.14%. The adolescents reported in their antecedent a notion of affective neglect or lack of parental care in  $n = 10$  or 28.57%.

**Conclusion:** Although fragmentary, the result of this study reflects the reality experienced by adolescents in Toamasina region. Mass psychoeducation through the development of sensitization through social networks and the mass media could contribute to a general awareness of adolescents to face against the proliferation of accessible psychotropic products.

**Keywords:** Cannabis; Insomnia; Psychiatric disorders; Psychotropic products; Tetrahydrocannabinol

### 1. Introduction

Nowadays, cannabis consumption is observed a real social phenomenon in Toamasina Madagascar. Recently, a number of minors have been arrested by the Police Drug Squad because of illicit sale of "space cake" in schools. The cognitive skills, scolar and social consequences constitute the dangerousness of this addiction in minors. The objective of the study is to determine the epidemiological and clinical profile of cannabis addiction in adolescents hospitalized in the Psychiatry Department of Analankinina Toamasina Madagascar Hospital.

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## 2. Methodology

This is a retrospective descriptive study using anonymous and confidential personal questionnaires. Were included hospitalized adolescents in the Psychiatry Department of Analankinina Toamasina Hospital during the year 2021, declared to have a past of taking cannabis and presenting psychiatric disorders. Incompleted registering and non-cooperating patients were excluded. Were studied sociodemographic parameters, clinical manifestations of psychiatric disorders, personality traits and level of cannabis dependence according to DSM-5.

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## 3. Results

The cases of 35 patients corresponding to the inclusion criteria were studied. The male was predominant in  $n = 24$  or 68.57%. The adolescents between 15 and 18 years old presented more disorders in  $n = 29$  or 82.86%. Teenagers with a school break at college level were the most represented in  $n = 15$  or 42.86%, followed by high school students in  $n = 10$  or 28.57%. The majority of adolescents had married parents in  $n = 20$  or 57.14%. The adolescents reported in their antecedent a notion of affective neglect or lack of parental care in  $n = 10$  or 28.57%. A family history of cannabis use was observed in  $n = 25$  or 71.43%. Personality traits of the antisocial type in  $n = 30$  or 42.86%, followed by the borderline type in  $n = 10$  or 28.57% and the personalities of the schizoid type in  $n = 15$  or 8.57% were the most observed. The association of cannabis with tobacco and cigarettes was mainly reported in  $n = 13$ , i.e. 37.14%. The clinical manifestation was represented mainly by aggressiveness in  $n = 14$  or 40.00% followed by clastic acts in  $n = 8$  or 22.57%. A delusional state of megalomaniac type was observed in  $n = 6$  or 17.14% and a mystical delirium in  $n = 4$  or 11.26%. Sleep was reported to be disturbed in  $n = 15$  or 42.86%. Cannabis dependence was assessed as severe in  $n = 12$  or 34.28%, moderate in  $n = 11$  or 31.44% and mild in  $n = 12$  or 34.28%.

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## 4. Discussion

### 4.1. Prevalence

The cases of 35 patients listed in the present study are generally not representative of cases of psychiatric disorder related to cannabis use in the region of Tamatave Madagascar. In fact, it is still rooted in popular memory that behavioral disorders are manifestations of a mystical and demonic belief which then require purification from traditional practitioners or religious authorities rather than in psychiatric services. Family shame, fear of social discrimination, geographic remoteness of patients and the existence of a single psychiatric reference center for the Tamatave region could also be the cause.

### 4.2. According to gender

The 68.57% male predominance observed in the present study has also been reported in several literatures such as that of Ratobimanankasina [1] in 2014. It is generally observed that the male gender has a higher taste for taking risk without worrying about the consequences of their actions. And in the Malagasy cultural context, it has generally been observed that young girls have a significant restriction on frequenting places such as bars. It was thus anchored in the common Malagasy memory that taking cannabis by young girls is a mark of non-respect for the morals left by the ancestors, causing them the absence of decency.

### 4.3. According to age

The age range of 15 to 18 years with 82.86% and extremes of 13 years in 2.85% and 17 years in 28.57% that were observed in the present study is also close to the results of studies conducted in Quebec in 2009 [2]. In fact, the period between 15 and 18 years-old is a pivotal stage towards adulthood. An important investment of the body through piercings, tattoos constitutes the beginning of an exploration of the outside world obviously leading to risk taking such as taking toxic substances. In addition, hormonal, psychic and bodily upheavals, sometimes causing internal tensions and anxieties, have sometimes led adolescents to experiment with cannabis in order to be able to relieve them.

### 4.4. According to the intellectual level

students having school breakdown at the level of College in 42.86% followed by high school students in 28.57% were the most cannabis users and having psychiatric disorders as reported in the present study, which is similar to the study of Spilka in 2010 [3]. The school environment shapes and conditions the future behaviors of adolescents. It could constitute a risk or a protection factor for adolescents against bad habits. The school breakdown observed in the present study proves the Malagasy cultural conception of cannabis as a "Zavamahadomelina" which means hinders of intellectual abilities.

#### **4.5. According to the marital status of the parents**

Adolescents who had psychiatric disorders with a past cannabis use reported married parents in 57.14%, which were similarly reported by several international studies such as in France by Arène and co. [4] and in the United States by Epstein and co. [5]. In a hasty way, the present study could mean that parental presence did not prevent anyway adolescents to take illicit substances such as cannabis in the cultural context of Toamasina. Maybe a dysfunction in parent-adolescent communications could be related to this observation.

#### **4.6. According to biography**

A notion of care neglect and affective deprivation has been widely reported in the antecedents of adolescents in troubles. Several international studies [6] have proven that physical and sexual abuse during childhood have been shown to be a risk factor for developing addiction to psychotropic substances in adolescence.

#### **4.7. According to the family history of cannabis use**

The present study joins the observations made by Chabrol and co. [7] which develop that the rush of adolescents to take toxic products is strongly conditioned by parental addiction itself and the perpetual presence of products circulating within the family.

#### **4.8. According to personality types**

The personality traits mainly highlighted in cannabis users in the present study were psychopaths in 42.86%, followed by the borderline type in 28.57% and the schizoid type personalities in 8.57%. In fact, by their basic characteristics, personality traits of the psychopathic type known for their recklessness in laws and life in society are not concerned with risky behavior and the consequences of their actions. Borderline type personalities characterized above all by their intolerance of the slightest frustration and the fear of being abandoned are easily attracted to toxic substances in order to soothe their internal tension. Schizoid personalities have an attraction towards euphoric substances to be able to fight against their loneliness in order to go towards the other.

#### **4.9. According to the clinical manifestations**

Cannabis pharmacopsychosis in adolescents were represented mainly by aggressive behaviors, clastic acts and megalomaniacal and mystical delusions. In fact, it is generally accepted in several literature [8] that cannabis has the ability to cause distortions of the perceptions of time, space, proprioception as well as acoustico-verbal hallucinations and personality disorders explaining the majority of the signs exhibited by the adolescents in the present study. Lissoni and co. [9] developed that Tetrahydrocannabinol increases the secretion of melatonin and during its weaning, sleep is disturbed.

#### **4.10. According to the level of dependence**

Teenagers of the present study were severely dependent on cannabis in 34.28% similar to the results of the study of Danovitch and co. [10] in the United States. The dangerousness of this addiction lies in the risk of development of chronic psychosis such as schizophrenia in predisposed subjects with premorbid personality traits (schizoids).

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### **5. Conclusion**

Although fragmentary, the result of this study reflects the reality experienced by adolescents in the Toamasina region. Mass psychoeducation through the development of sensitization through social networks and the mass media could contribute to a general awareness of adolescents to face against the proliferation of easily accessible psychotropic products.

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### **Compliance with ethical standards**

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*Disclosure of conflict of interest*

The authors declare no conflict of interest.

*Statement of ethical approval*

The present research work does not contain any studies performed on animals/humans subjects by any of the authors. Permission to conduct the study was obtained from Department of Psychiatry, Analankininina Toamasina University Hospital, Madagascar.

*Statement of informed consent*

Informed consent was obtained from the patient included in the study. The patient information was be kept confidential during and after study period.

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