Abstract

Introduction: The use and abuse of psychoactive substances (SPA) in the adolescence age has become a major public health concern. In this study, we sought to determine the prevalence of the consumption of psychoactive substances, to identify the different substances consumed as well as the motivations underlying this consumption.

Methods: It is a 6-month cross-sectional prospective study carried out in two public Junior Secondary Schools in Conakry. It involved 600 students and the sampling was simple random. Were included in this study, all the students of the two Junior Secondary Schools retained following the sampling; and having correctly completed the questionnaire and returned it. To carry out this work, we proceeded to a simple random sampling by drawing lots.

Results: The prevalence of SPA consumption was 35.5%, boys were read represented (64.8%), the age groups 12 – 16 years and 17 – 20 years were the most affected 41% each). In the majority of students (72%), parents were separated and 72% of them had repeated at least once. The most consumed substances were only cannabis (24%) and tobacco (8%), the combination tobacco + cannabis represented 44% and irregular consumption of these substances was the most frequent (66% for cannabis and 63% for the tobacco). The first experience of these substances was very early in 21% for cannabis and 49% for tobacco.

Conclusion: The consumption of psychoactive substances constitutes a real public health problem. A study of all the schools in the capital city and at the national level seems essential to situate the extent of the phenomenon and analyze the various factors involved in order to provide appropriate solutions.

Keywords: Psychoactive substances, Teenagers

1 | INTRODUCTION

The term “psychoactive substances” is currently used to designate a substance which
CONSUMPTION OF PSYCHOACTIVE SUBSTANCES AMONG TEENAGERS IN SCHOOLS IN CONAKRY, REPUBLIC OF GUINEA

has both psychotropic and addictive properties. This definition leads to a distinction between two types of disorders: on one hand, disorders linked to the conditions of pathological use of psychoactive substances (abuse and dependence), on the other hand, disorders linked to the direct acute or chronic effects of these substances on the central nervous system (1).

Thus, these psychoactive substances are generally represented by: tea, coffee, tobacco, alcohol, cannabis, opiates, cocaine, amphetamines (2, 3). Their consumption can cause psychiatric disorders (agitation and excitement, mental confusion, psychotic reaction, deficit syndrome) somatic disorders (coma, infection, sexual disorders, gastrointestinal complications …) (2).

The existence of certain disorders (schizophrenia, depression) can lead to the consumption of these psychoactive substances. It therefore becomes necessary for a preventive purpose to highlight the factors playing a role in the initiation or in the continuation of consumption. In general, children and teenagers are exposed to this phenomenon because of their psychological vulnerability, their curiosity in search of new sensation and experience, in search of unusual pleasure and spirituality, of desire to break with the world, a desire for prostration, a tendency to flee and identify with a group (1, 2, 4).

Indeed, different risk factors are individualized: parental habit to psychotropic drugs, disturbance of parent – child emotional relationships, regular administration of psychotropic drugs to the child, the influence of the group (2).

The use and abuse of psychoactive substances in adolescence has become a major public health concern (4, 5).

The frequency of consumption of psychoactive substances is variously mentioned in the literature. In Switzerland, among 15-year-old adolescents, the rate of youth who have consumed cannabis during their lifetime rose between 1986 – 1998 from around 10 to 30%, with a clear predominance of men. Regular tobacco consumption is around 40% of the adolescent population (4).

In the United States, the American study published in 1990 by the National Institute on Drug Abuse: 19% "Senior High School" said they smoke cigarettes daily, 4% drink alcohol daily and 3% use marijuana daily (6).

In the Democratic Republic of Congo [28] 25% of patients admitted for behavioral disorders and cannabis abuse were students.

In Guinea, SAMOURA M (7) found in his research in 2005, 16.46% of teenagers aged from 10 to 19 among the 395 cases of mental disorders associated with the consumption of psychoactive substances.

Surveys among teenagers are proving difficult since consumption problems are ignored by parents who do not pay attention to their addiction, and yet new products regularly arrive on the market and primarily affect children eager for new experiences. (4).

In Guinea, no data on the consumption of psychoactive substances, particularly in schools, is yet available. The objective of this study was to determine the frequency of consumption of psychoactive substances, to identify the different substances consumed as well as the different motivations underlying this consumption.

2 METHODS

This study was carried out in 2 public Junior Secondary Schools in 2 different communes of the city of Conakry: the Koloma Junior Secondary School in Kaporo Rail, commune of Ratoma, with a number of 3850 students, including 2567 boys and 1283 girls and the Junior Secondary School of Bonfi 2 in Bonfi Marche in the Commune of Matam, with a number of 1938 students, including 1161 boys and 777 girls.
Our data collection sources were class registers, school booklet and the questionnaire developed for the survey. This questionnaire included 14 items divided into 3 categories (socio-demographic data, the nature of the substances consumed and the reasons for the use and its consequences). For the survey, 1235 students from both Junior Secondary Schools had received the questionnaire and 715 who had returned. Among the 715 questionnaires returned, only 600 were retained.

It is a 6-month cross-sectional prospective study (from December 2, 2018 to May 2, 2019). Were included in this study, all the students of the two public Junior Secondary Schools retained following the sampling; and having correctly completed the questionnaire and returned. To carry out this work, we proceeded to a simple random sampling by drawing lots. PEARSON’s Chi-square statistical test with a 5% significance level was used.

Progress of the investigation: first, we met with the Communal education authorities of the two Communes, the management of the two Junior Secondary Schools and the pupils’ parents association and friends of the school of the two institutions to explain the survey and its objectives to them. With the agreement of the authorities, explanatory and information meetings on the objectives of the investigation had taken place with the teachers responsible for the different classes and the students. A questionnaire validation test was carried out on a sample of 100 students.

After the sampling, the questionnaire was distributed to the selected students in envelopes to complete and return within 7 days.

On the ethical point of view: before the distribution of the questionnaire, we obtained the free consent of the students and they were reassured of the confidential nature, anonymity was obtained by assigning each student an identification number.

The questionnaire and the note takings were destroyed after their use in order to guarantee confidentiality.

### RESULTS:

Out of a total of 600 students who correctly completed and returned the questionnaire, 213 had consumed at least one psychoactive substance (SPA), i.e. 35.5%. Boys represented 64.8% (138 cases) against 35.2% (75 cases) of girls. Table 1

|         | Girls | Boys | Total |
|---------|-------|------|-------|
| Consumers | 75    | 138  | 213   |
| %       | 35.2  | 64.8 | 100   |
| Non-consumers | 170   | 217  | 387   |
| %       | 44    | 56   | 100   |
| Total   | 245   | 355  | 600   |

\[ X^2 = 1.52 \quad P = 0.21 \]

The extreme ages of our sample were 10 and 23 years; the 13 – 16 and 17 – 20 age groups were the most common (41% each), followed by those under 13 (10%) and over 20 (8%). According to the school situation, the students who consumed SPA were more in difficulty (72%) than the non-consumers (28%) with a statistically significant difference. Table 2

|                | Consumers | Non-consumers |
|----------------|-----------|---------------|
| Repeating      | 153       | 58            |
| %              | 72        | 15            |
| Without repeating | 60     | 329           |
| %              | 28        | 85            |
| Total          | 213       | 387           |

\[ X^2 = 63.45 \quad P < 0.0005 \]

Parents did not live together, in 72% of cases, with consuming students versus 28% with non-consumers. Table 3

Taking into account the type of substances consumed and their frequency of use, cannabis ranked first (66%), followed by tobacco (63%), alcohol and cocaine (6% each), other psychotropic drugs (2%) and finally opiates (1%) in terms of irregular consumption. As for the regular consumption, cannabis still ranks first (19%), followed by tobacco (6%), alcohol (3%) and other psychotropic drugs (2%).

### Table 1: Distribution of students by sex

|        | Girls | Boys | Total |
|--------|-------|------|-------|
| N      | %     | N    | %     |
| Consumers | 75    | 138  | 213   |
| %       | 35.2  | 64.8 | 100   |
| Non-consumers | 170   | 217  | 387   |
| %       | 44    | 56   | 100   |
| Total   | 245   | 355  | 600   |

\[ X^2 = 1.52 \quad P = 0.21 \]
TABLE 3: Distribution according to the family situation of parents

| Parents living together | Parents not living together | Total  |
|-------------------------|-----------------------------|--------|
| N  | %     | N  | %     | N  | %     |
| Consumers               | 60  | 28  | 153 | 72  | 213 | 35.2 |
| Non-consumers           | 360 | 93  | 27  | 7   | 367 | 64.8 |

\[ \chi^2 = 91.72 \quad P = 0.0001 \]

Cocaine and opiates were not represented. Regarding the age of the first use of the different substances, 62% of the students had started with cannabis between 13 – 17 years old, 21% between 8 – 12 years old and 4% between 18 – 22 years old; with tobacco 49% between 8 – 12 years old, 15% between 13 – 17 years old and 6% between 18 – 22 years old; with alcohol, 14% between 13-17 years old and 3% between 8-12 years old and 17 – 22 years old; with cocaine, 3% between 13 – 17 years old and 18 – 22 years old and as for opiates and other psychotropic drugs, respectively 1.4% and 2.3% between 18 – 22 years.

Our study population used a single SPA or in combination: cannabis in 24% of cases, tobacco 8%, alcohol 3%, the combination tobacco + cannabis 44%, the combination tobacco + alcohol 3%, cannabis + alcohol 3%, cannabis + alcohol + tobacco 8%, cannabis + cocaine 3%, cannabis + alcohol + tobacco + cocaine 1%, opiates + cannabis 1% and cannabis + benzodiazepines 2%. Practices and behaviors were noted among the students in our sample and these practices and behaviors were often associated; thus sports practice was mentioned by 89%, the recreational evening 90%, the car race 15%, the fight 52%, the physical aggression 45%, the verbal aggression 65% and the theft 35%.

Depending on the type of motivation, the search for creativity was mentioned in 35% of cases, followed by curiosity 23%, pressure from the group 21%, the need for reassurance 10%, challenge to society and better self knowledge 4% each and search for escape 3%. Among the different types of consumption, festive or recreational consumption was the most predominant (76%). Drug addiction and auto therapeutic use represented 17% and 7% respectively.

In the majority of cases (63%) there was no history of personal and / or family mental or behavioral disorders. On the other hand, 3% of the students had reported a personal history of mental disorders, 3% of family history of the 1st degree and 22% of the 2nd degree of mental disorders.

4 | DISCUSSION

Despite the small size of our sample, the results we obtained constitute an indicator of the situation of the SPA consumption in schools. The sampling used was well adapted to this type of study. Among the 600 students selected, 213 students declared consuming one or more SPA, equivalent to 35.5% of the cases.

The frequency of the SPA consumption is variously assessed in the literature: According to a study carried out by the National Institute of Health and Medical Research (INSERM) (8) in schools, 31% of high school students had the opportunity to consume an illicit drug and 25% of them had tried an SPA at least once in 1988 against 8% in 1979 (one third of boys, one seventh of girls). Another study carried out by the adolescent health team of INSERM and the French Observatory for Drugs and Drug Addiction (OFDT) showed that the vast majority of 12 – 18 year old students had experienced SPA. According to the same study, the fact of consuming one of the three most common SPAs (alcohol, tobacco, cannabis) during one’s lifetime concerns 88% of boys aged 12 – 18 and 84% of girls (9).

This high frequency of SPA consumption in schools could be explained by the fact that this population, made up mainly of teenagers and young adults, remains very exposed because of their vulnerability during this period (group phenomenon, search for sensation, curiosity, imitation and search for experience).

The age of our population ranged from 10 to 23 years old with an average of 16 years old. The 13 – 16 and 17 – 20 year olds were the most affected with respectively 41% and 41%, followed by those under
For STEPHANE (4), those under 12 represented 14% of consumers. Our results have shown that the SPA consumption starts very early and increases with age. This observation is similar to that of certain authors (4, 9).

In our society boys are turbulent, they often escape parental control and in general, the SPA consumption in our traditions was less frequent or even non-existent among girls. However, the 35% of girls who declared consuming one or more SPAs seem worrying to us, because this shows us a tendency towards the feminization of consumption. In France, according to an INSERM survey conducted by Choquet M et al (10) 29% of 14 – 18 year old girls in secondary school were / had been tobacco smokers in 1999 against 22% of boys.

The majority of students who repeated a class (72%) declared to have consumed one or more SPAs compared to 15% of non-consumers. this difference was statistically significant.

LEGLEYE et al (11) found 42.8% of repetitions among students can lead to problems in various areas: drop in academic or professional results, consumers of SPA.

Several hypotheses could make it possible to prove the predominance of repetition among students who use SPA: Young people who repeat a year could feel that they are failing at school and consume SPA to compensate for this discomfort. Then the SPA consumption could be on the contrary at the origin of their repetition, because of their effects on the capacities of attention, concentration and on the memory phenomena and finally the consumption and the repetition could be the facets of a same problem.

For some authors (12, 13), in a significant number of teenagers, often still young, consumption can lead to demotivation, petty crime, repeated accidents and family and social conflicts.

The majority of SPA consumers lived in a family with a different structure compared to non-consumer students with a statistically significant difference. This result is contrary to that of LEGLEYE et al (11) who found in their study that 80% of the students consuming SPA had parents who lived together with them.

For EPELBAUM C (8) 50% of drug addicts have separated parents against 25% in the general population. In the family characteristics of SPA users, we note the frequency of family dissociation and the frequency of foster care or education of children by an ”extended family” (14).

When parents are not living together this is a source of concern for teenagers as it is ideal for them to see them together. The use of SPAs can be seen as a solution for the management of this concern. When parents live together and there are relationship difficulties (disagreement) this can be a source of psychological suffering and expose you to the same risk.

We did not find a difference for the practice of sport and recreational outings between consumers and non-consumers. However, there is a difference between these two groups for certain practices and behaviors. Thus, the highest frequency of car racing, physical and verbal aggression, and theft were noted among consumers. The effects of the most widely consumed substances can lead to a more or less lasting disruption of mental activity leading to a decline in discernment of reality and common sense.

In this work, the search for artistic creation, curiosity and group pressure were the main motivations.

For MARCELLI D (14) 60% of SPA consumption among teenagers is motivated by curiosity and 5.7% by the search for artistic creation. These different sources of motivation that have been identified are specific to this population generally characterized by curiosity, the search for experience, the search for sensation. Submission to group pressure, the predominance of artistic creation as a motivation for the consumption of SPAs could be explained by the fact that more and more we are witnessing the birth of certain artistic groups (rappers) within which SPA consumption (cannabis and alcohol) is considered to be an internal source of creation, inspiration and dissipation of feelings of embarrassment and shame.

The majority of consumers (76%) would use SPA during recreational outings (fairs, nightclubs, street shows) this same observation has been made by other authors (14) who have found that these types of consumption are done in small groups of friends, never alone, most often on weekends during the
CONSUMPTION OF PSYCHOACTIVE SUBSTANCES AMONG TEENAGERS IN SCHOOLS IN CONAKRY, REPUBLIC OF GUINEA

holidays. It is especially the euphoric effect of the product that would be sought. Drug addiction and self-therapy are lonely, however, can alternate with times of group consumption; it is the anesthesia-high and anxiolytic effects that would be sought.

In terms of the types of substances consumed and their frequency of use, cannabis and tobacco were the most frequently used substances and were inconsistent with other substances. STEPHANE (4) found that regular tobacco consumption is around 40% of the adolescent population. For Choquet M et al (15), one third of teenagers aged 11 – 19 smoke irregularly, one third regularly smokes less than ten cigarettes per day and one third smokes at least two packets per day. As for cannabis, 6% of teenagers questioned in this survey had experimented with it. For about two decades we have seen an increase in the circulation and consumption of cannabis in Guinea.

SPAs were either consumed alone or in combination. Cannabis was the most consumed substance (24%) followed by tobacco (8%). Our results are in the same direction as certain data in the literature (16–20). This high rate of cannabis consumption could be explained by its availability and low purchasing cost.

According to STEPHANE (4) the consumption of legal substances (alcohol, tobacco) would be a gateway to the consumption of cannabis which itself would give easier access to harder drugs hence the combinations of toxicants, which are of more and more frequent. The most common combination was tobacco + cannabis (44%) followed by tobacco + alcohol + cannabis (8%). These results agree with that of XAVIER et al (21) while OKITUNDU et al (22) found the combination of cannabis + alcohol more frequent. This frequency of poly-consumption of SPA could be explained by the culture of poly-drug addiction transmitted by relatives or “peers”, the search for the complementarity of the effects of different substances and the search for new and old sensations. Tobacco is a good way of concealing cannabis from consumers.

We noted that 49% of our sample had their first tobacco experience between the ages of 8 – 12 years old and 21% for cannabis. STEPHANE (4) in his study found 14% of smoking before 12 years old. Between 13 – 17 years old, 62% of the students in our study had their first experience of cannabis. This observation leads us to say that the onset of the consumption of SPA is very early in some children. Tobacco, by virtue of its legal status, seems to be the gateway to cannabis consumption. Contrary to some data in the literature (8), we noted little psychiatric family history. This underreporting of psychiatric antecedents could be explained by the fact that in an African environment psychiatric disorders are not codified and therefore not recognized as such, which makes it difficult to identify them in terms of antecedents on the one hand. On the other hand, the negative image that disorders most often convey leads many people to deny their existence.

5 | CONCLUSION

This prospective study found that the consumption of psychoactive substances is a common practice among some students.

This consumption begins early, teenagers were the most represented. However there is a tendency to feminize the phenomenon.

The most widely used substances were cannabis, tobacco, and then alcohol, often alone or in combination. Children from dissociated family structures were the most represented. Festive consumption was the most frequent and the motivations were represented by curiosity, artistic creation and group pressure.

The majority of consumers had repeated their class at least once.

The consumption of psychoactive substances constitutes a real public health problem. A study covering all the schools in the capital city and at the national level seems essential to situate the extent of the phenomenon and analyze the various factors involved in order to provide appropriate solutions.

REFERENCES

1. BAILLY. D: Behavioral disorder induced by psychoactive substances. Psychiatric Annals [Ann psychiatr.] 2000 vol. 15 n° 4, p: 246 - 53
2. AUBERT, F., GUITTARD, P.: Alcoholic illness and drug addiction. Pocket Medical Essentials Ed Marketing Ellipses 1990, p. 1073-82.

3. OLIENVENSTEIN, C. S.: The drug University ed., Paris 1970.

4. STEPHANE, P.: Use and abuse of substances in adolescence medicine and hygiene [Med. hygi] 2002 vol. 60, n° 2413.

5. MEUNIER, N., BERCHOUT, C., AUBINH-J: Treatment of dependence on psychoactive substances: Annals medico-psychological [Ann. Med psychol] 2003, vol 161 n° 7, PP 556 - 62.

6. LOO, H.: Current addictions. Thesis Paris 1970, 178 pages.

7. SAMOURA MAMADOU: Psychoactive substances and mental disorders: epidemiological and clinical aspects in the Department of Psychiatry of Donka, doctorate thesis in medicine 2005 No. 146.

8. EPELBAUM, C - Drug addiction in (in): PIERRE F. EPELBAUM, C.: Child and adolescent psychiatry, Flammarion, Paris, 1993 p: 377-87.

9. INSERM and OFDT: Consumption of psychoactive substances by 12 - 18 year-olds, evolution between 1993 and 2003, Press release April 14, 2004.

10. CHOQUET, M., LEDOUX, S.: Consumption of psychoactive substances among 14 - 18 year-olds in school: first result of the ESPAD 1999 survey; supplement to TREND No. 6.

11. LEGLEYE, S., BECK, F., PERETTI-VATEL: Consumers of alcohol or cannabis at 17: What are the differences? Alcoholology and Addictology. [Alcoholology Addictology] 2002 vol. 24, No. 2 PP 127-33.

12. GENTILINI, M.: Drug addiction and pharmacodependence, Tropical Medicine 1993, 5th Edition Flammarion Paris 724 – 30.

13. SALADINI - O, WOMEN, N., LUANTE, J., et al.: Evolution over 22 years old of the frequency of the combination of cannabis acute psychiatric disorder in a general psychiatric sector; Medico-psychological annals [Ann. Med. psychol] 2005 vol. 163, No. 6 PP 502 - 06.

14. MARCELLI D, BRCONNIER A. Adolescence and psychopathology, 5th ed. Masson Paris, 1999; p: 330-68.

15. CHOQUET, M., LEDOUX, S.: Update on illicit drug consumption among adolescents in France. Medicine and Hygiene, 46.2034-38.

16. CATAN, G.: Psycho stimulants, pharmaceutical news Sept. 1990 No. 279 PP 32 – 40.

17. CHALTIEL, T., B ALKAN T and COLL: Addiction and cannabis clinical study on teenagers admitted in a psychiatric environment. Psychiatric Information Vol. 79, No. March 3, 2003, 215 – 20.

18. HATCHET, PASCAL: Use of Cannabis in adolescence and sensoriality. Psychiatric perspective [Perspect. Psychiatr.] 2002, vol. 41 n° 4 PP 286 - 289.

19. LIRAUD, F., VERDOUX, H.: Neuropsychological impact of the abuse of psychoactive substances in psychotic and mood disorders, encephalon (Paris) [encephalon: (Paris)] 2002, vol. 28, No. 2, PP 160 – 68.

20. LUTE J-P, SALADINLO, FERNANDES, N., et al.: Cannabis and psychosis, experience of a sector: Neur - psy neiros [Neuro psy neiros] 2004, vol. 3 No. 3, PP 126 - 135.

21. XAVIER LAQUEILLE, AMINE BENJAMIN, MUSTAPHA. KANIT, ALAIN DERVAUX: Psychiatric aspects of cannabis consumption, psychiatric information vol. 79 No. March 3, 2003 PP 20 – 13.

22. OKITUNDU, L. E., MIFUNDU, B.: Cannabism and mental disorders in Zairian rural area: epidemiological aspects 1995 vol. 42 No. 5 PP 243 - 45.

How to cite this article: Morifodé D., K S., MT K. Consumption of psychoactive substances among teenagers in schools in Conakry, Republic of Guinea. International Journal of Contemporary Research and Review. 2020;20869-20875. https://doi.org/10.15520/ijcrr.v11i10.854