

Drug addiction among high school students in Toamasina I Madagascar in 2020

Herilanja Hiarenantsoa RATOBIMANANKASINA ^{1, *}, Holy Ainamalala Razakandrainy ², Bertille Hortense RAJAONARISON ³ and Adeline RAHARIVÉLO ³

¹ *Psychiatric Department, Universitary Hospital Center of Analankininina Toamasina, Madagascar.*

² *Mental Health Department, University Unite Care Center of Analakely Antananarivo, Madagascar.*

³ *Faculty of Medicine, Antananarivo University, Madagascar.*

World Journal of Advanced Research and Reviews, 2023, 17(01), 450–454

Publication history: Received on 05 December 2022; revised on 12 January 2023; accepted on 15 January 2023

Article DOI: <https://doi.org/10.30574/wjarr.2023.17.1.0063>

Abstract

Introduction: The problematic use of psychoactive substances by high school students is currently more and more widespread social phenomenon. The dangerousness of these misuses is cognitive decline and behavioral disorders with legal consequences. The objectives of the study is to show a screening of the socio-demographic and clinical profile of high school students taking psychoactive substances in the Region of Toamasina I Madagascar.

Research methods: This is a cross-sectional study carried out on a sample of population made by high school students from the Region of Toamasina I Madagascar, from the class of Second to Terminale, among 6 high schools establishments, obtained after a draw, from October 01st to November 30th, 2020. Students were asked to fill out questionnaires and submitting them immediately. The content of the questionnaires was made up of the standardized assessment items ASSIST Version 3.0 (Alcohol, Smoking, and Substance Involvement Screening Test). It was studied the social and demographic parameters with the clinical symptoms presented by high school students who reported a notion of taking or using psychoactive substances and finally, the level of dependence on these substances.

Conclusion: Almost of high school students are classified as occasional users who, during a meeting with their classmates or during a trip, would allow themselves to be convinced of the need to accept drug use as symbol of sharing and brotherhood. Sensitizations must be initiated to aware of the imminence of this dangerous health problem.

Keywords: Addiction; Epidemiology; Psychoactive Substances; Psychiatry; Students

1. Introduction

The problematic use of psychoactive substances by high school students is currently more and more widespread social phenomenon. The dangerousness of these misuses is cognitive decline and behavioral disorders with legal consequences. The objectives of the study is to show a screening of the socio-demographic and clinical profile of high school students taking psychoactive substances in the Region of Toamasina I Madagascar.

2. Generalities

The Tenth Version of the WHO International Classification of Diseases defines the criteria for psychoactive substance dependence [1] with at least three of the manifestations in the past year: a strong desire to use a psychoactive substance, difficulties in controlling the use of the substance, appearance of withdrawal syndrome while stopping or reducing doses or taking the product to avoid a withdrawal syndrome, tolerance to the effects of the substance, increase in doses

* Corresponding author: Herilanja Hiarenantsoa RATOBIMANANKASINA

to obtain the desired effect, an overall lack of interest in everything, a continuation of consumption despite the awareness of the problems it causes.

3. Research methods

This is a cross-sectional study carried out on a sample of population made by high school students from the Region of Toamasina I Madagascar, from the class of Second to Terminale, among 6 high schools establishments, obtained after a draw. This study took place from October 01st to November 30th, 2020, during the 2020-2021 school years. Students were asked to fill out questionnaires and submitting them immediately. The content of the questionnaires was made up of the standardized assessment items ASSIST Version 3.0 (Alcohol, Smoking, and Substance Involvement Screening Test) which is a standard test validated by the World Health Organization. It was studied the social and demographic parameters with the clinical symptoms presented by high school students who reported a notion of taking or using psychoactive substances and finally, the level of dependence on these substances.

4. Results

The population was made up of 600 cases of high school students distributed in 6 different high schools in the region of Toamasina I Madagascar. The average age of the students was 18 years old with extreme ages of 14 and 22 years old. Three hundred and thirteen (n=313) of high school students were female, i.e. 52.17%, and two hundred and eighty-seven (n=287) male, i.e. 47.83%. The majority was in the class of Terminale A with n=159 i.e. 26.50%, followed by the class of Second with n=134 i.e. 22.33%. The pupils were mainly Christians with n=540 i.e. 90%, living with married parents with n=258 i.e. 43%. The most taken psychoactive substances were, in descending order, beer (n=366 i.e. 61%), alcohol (n=303 i.e. 50.5%), cigarettes (n=242 i.e. 40.3%), tobacco (n=117 i.e.19.5%), cannabis (n=83 i.e. 13.83%), heroin (n=7 i.e. 1.16%).

The pupils without affirmations were n=12 i.e. 2%. Dependence was found in n=26 i.e. 4.33% for cigarettes, n=6 i.e. 1.00% for cannabis. The majority of other psychoactive substances were taken once a week according to the following table.

Daily tobacco users reported memory problems in 7.74%, including retrograde amnesia in 3.44%, anterograde disorders in 2.58% and mixed ones in 1.72%. Attention troubles were mentioned in 11.20%. For daily consumers of alcohol and beer, skipping school (1.32%), cognitive disturbances such as memory impairment (3.63%), attention disorders (4.30%) have been reported. Daily cannabis users reported having regularly anxiety experiences (1.20%), phobic disorders (1.20%), a depressive mood (1.20%), emotional withdrawal (1.20%), lack of self-esteem (3.61%) and adjustment problems such as loss of motivation to continue studying (28.91%).

Table 1 Use of drugs according to age, school level and level of dependence according to the ASSIST Version 3.0 scale

		Cigarettes	Tobacco	Alcohol	Beers	Wine	Cannabis	Héroïne	Khat
Age range	< 15 years-old	67 (11.1%)	43 (7.1%)	105 (17.5%)	128 (21.3%)	57 (9.5%)	39 (6.5%)	2 (0.33%)	3 (0.50%)
	15-19 years-old	140 (23.33%)	49 (8.16%)	141 (23.4%)	205 (34.16%)	92 (15.33%)	27 (4.50)	4 (0.66%)	8 (1.33%)
	>19 years-old	36 (5.83 %)	25 (4.16%)	57 (9.5%)	33 (5.5%)	10 (1.66%)	17 (2.82%)	1 (0.17%)	4 (0.66%)
Level of studies	Second	31 (5.17%)	37 (6.16%)	74 (12.33%)	74 (12.33%)	44 (7.33%)	31 (5.16%)	3 (0.5%)	2 (0.33%)
	Primary	46 (7.67%)	28 (4.67%)	56 (9.33%)	129 (21.5%)	38 (6.3%)	25 (4.16%)	1 (0.16%)	1 (0.16%)
	Terminal A	61 (10.16 %)	33 (5.50 %)	67 (11.1%)	62 (10.33%)	31 (5.17%)	7 (1.17%)	1 (0.16%)	3 (0.5%)
	Terminal C	55 (9.16%)	10 (1.66%)	44 (7.34%)	57 (9.5%)	20 (3.3%)	31 (2.1%)	1 (0.16%)	5 (0.84%)

	Terminal D	49 (8.16%)	9 (1.50%)	62 (10.33%)	44 (7.33%)	26 (4.33%)	7 (1.17%)	1 (0.16%)	4 (0.66%)
Level of dependance ASSIST	None	33(5.55%)	36 (6.00%)	145 (24.17%)	120 (20.00%)	90 (15.00%)	7 (1.16%)	2 (0.33%)	3 (0.5%)
	1-2 times	152 (25.33%)	61 (10.16%)	89 (14.83%)	182 (30.33%)	43 (7.17%)	42(7.00%)	3 (0.5%)	3 (0.5%)
	1 time/month	13 (2.16%)	13 (2.16%)	37 (6.16%)	43 (7.16%)	19 (3.16%)	17(2.83%)	1 (0.16%)	2(0.33%)
	1 time /week	18 (3.00%)	6 (1.00%)	32 (5.33%)	21 (3.50%)	7 (1.16%)	11(1.83%)	1 (0.16%)	5 (0.83%)
	Daily	26 (4.33%)	0	0	0	0	6 (1.00%)	0	0

5. Discussion

5.1. Prevalence

The study found a prevalence of 81.51% of high school pupils who had already taken drugs. Seventy point ninety-nine percent (60.99%) of them reported having already consumed beer, 50.49% alcohol, 40.32% cigarettes, 26.49% wine, 19.49 % tobacco, 13.82% cannabis, 2.49% Khat and 1.16% heroin. This study is close to the results of that carried out by Ratobimanankasina about the epidemiological profile of drug addiction among high school students in Antananarivo in 2013, which observed 58.75% consumption of beer, 3.08% of alcohol, 10.67% of cigarettes, and 29.5% of wine, 10.64% of tobacco, 13.75% of cannabis, 4.24% of khat and 2.05% of heroin [3]. However, the consumption of alcohol, beer, cigarettes and cannabis increased in this present study.

5.2. Age

The average age was 17.5 years with an extreme age of 13 and 22 years-old, which does not know great variation compared to the results of the study of Raobijaona about young people and drug addiction in Antananarivo in 2007 [4].

5.3. Gender

Both genders were affected by drug use, but with a male predominance of 45.33% like shown in the majority of literature [5].

5.4. Religious affiliation

It was observed that 25.83% of pupils who declared to belong to the Protestant religion, 29.5% to the Catholic religion, 12.50% as Muslims and 11.83% from other obediences reported having taken drugs. The question is about the sensitivity of adolescents in front of religious authorities.

5.5. Hobbies

In this study, 21% of high school students who said they had taken alcohol, then 11.17% of cigarettes and 7% of cannabis verbalized not having any hobbies. However, cigarette smoking was observed in 8.66% of students who reported having regularly practiced sports. Similarly, beer was taken in 12% and cannabis in 1.33% of those sports pupils. In addition, high school students who say they practice choir took cigarettes in 8.17%, beers in 11.6% and cannabis in 1.16%. To be in a group would be considered as one of protective factors of high school students against taking drugs but it largely depends on the mind state of each ones.

5.6. The marital status of the parents

Drug use was observed on 21.16% of high school students declaring to have married parents; 20.16% for those living with both parents together, 16.83% for those having separated parents, 9.83% for having divorced parents and 13.50% for declaring widowed parents. High school students from married and living with both parents together were the most concerned. The financial permission, the accessibility, the distortions of the parental figures, the affective imbalances within the family nucleus would be their causes.

Moreover, loneliness state and emotional detachment with parents or family would constitute other precipitating factors.

5.7. Type of drugs

The consumption of beer (60.99%) was the most declared by pupils with a major proportion of girls (32.16%) as reported in almost studies in Africa [6]. This drink is publicized and accessible. It was designed to make slow intoxication. However, alcohol consumption (50.49%) was mainly observed among male high school students, which has been similarly reported by other Malagasy studies [7]. The quest to demonstrate virility and the multiplicity of open-bars in Toamasina townside would be the causes.

Moreover, 19.49% of high school pupils narrated chewing tobacco at least once upon a time, including 12.16% of boys and 7.33% of girls with a peak of attempts between 15 and 18 years old (8.73%). The class of Second (6.16%) and Terminal A (5.50%) were the most represented. In fact, tobacco belongs to an integrative part of Malagasy daily life, which explains its accessibility.

In addition, 40.32% of high school students reported smoking cigarettes, including 27.16% of boys and 13.16% of girls with a sex ratio of 0.48. Cigarettes are then the most taken substance after beer and alcohol for students between 15 to 18 years-old (19.32%). The most affected classes were those of Terminale A (10.16%). Similarly, a study by Befinoana and Razanamihaja showed that 55.2% of teenagers in Toamasina smoked cigarettes [8].

The rate of cannabis use is 13.82% with a male predominance (11.66%) and a minority of female gender (2.16%) with a peak age between 15 and 18 years (6.82%). Students were mainly in the class of Second in 5.16% (n=31). Spilka S. and Le Nézet O's study of 16-years-old adolescents in more than 30 European countries showed that one in three high school students said they had used cannabis, boys more often than girls (51% versus 46%) [9]. Even if cannabis does not benefit from any media campaign in Madagascar, the youngest pupils are always touched.

Beside this, heroin is mostly reported to be injected. Its intake was 1.16% (n=7) with a male predominance (71.55%). The age range between 17 to 18 years-old (0.49%) and that between 19 to 20 years-old (0.33%) as well as the class of Terminale C (0.5%) were the most affected. Even this statistics stayed minor, without substantial awareness, this prevalence could turn into a real public health problem.

5.8. Clinical manifestations

Tobacco was mentioned to be taken once a month in 2.16% of cases and once a week in 1%. Daily users declared having memory troubles in 7.74%, including retrograde amnesia in 3.44%, anterograde amnesia in 2.58% and mixed ones in 1.72%. Attention disorders were mentioned in 11.20% of cases. The 3.30% of cigarette smokers reported having behavioral problems such as irritability and a loss of motivation to go to school. The 5.17% of high school students had a desire to drop out school and 6.89% of them verbalized sleep disorders such as daytime falling asleep.

Disorders reported by high school students who consumed alcohol and beer daily were mainly truancy (1.32%), cognitive disorders such as memory impairment (3.63%), attention disorders (4.30%) and psychiatric reactions such as manic mood in 0.66% of cases. Moreover, 2.83% of high school pupils said that they had a monthly alcohol or beer consumptions, 1.83% a weekly consumption and 1% a daily consumption.

In addition, daily cannabis users reported anxiety disorders (1.20%), phobic troubles (1.20%), depressive mood (1.20%), emotional withdrawal (1.20%), lack of self-esteem (3.61%) and adjustment disorders such as lack of motivation to continue studying (28.91%) and daytime sleepiness (2.40%). Even if the signs presented could be considered as effects of acute and chronic intoxication from cannabis consumption [10], it is difficult to make a direct correlation between the clinical manifestations observed, which have multifactorial etiology, and the manner of taking the substance.

6. Conclusion

Almost of high school students are classified as occasional users who, during a meeting with their classmates or during a trip, would allow themselves to be convinced of the need to accept drug use as symbol of sharing and brotherhood. A minority is represented by habitual users who regularly takes psychoactive substances despite desocialization. However, the education of these high school students about of drug effects in health must be reinforced in school programs to strengthen their personality to face bad attractions. Moreover, social psycho-education through

sensitizations must be initiated to aware of the imminence of this dangerous health problem which is gradually ruining the academic skills of high school students.

Compliance with ethical standards

Acknowledgments

We would like to thank our Masters, Specialists, Psychologists, Generalists and mental health nurses from the Psychiatric Department of Analankininina Toamasina University Madagascar for all the support they have provided during the preparation of this work.

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.

References

- [1] Sandor F. On addictions. Paris: Little Payot Library, 2008; 675:44-5.
- [2] J Ades. Introduction. In: Julien DG, Frédéric R, dir. Handbook of Psychiatry. Paris: Mason. 379p.
- [3] Ratobimanankasina HH. Epidemiological profile of drug addiction among high school students in Antananarivo [Thesis]. Human medicine: Antananarivo; 2013. 34p.
- [4] Michel G, Mouren MC, D Purper O. Factors of psychoactive substance consumption behavior in adolescence. Medical-psychological Annals, psychiatric journal. 2001 Nov;159:622-31
- [5] WHO. The world drug problem: the public health angle. 2017
- [6] Dagnan ND, Zengbé-Ac ray P, Ahoussou EMK, Ekou FK, Kouassi DP, Sablé PS, Oussou KR et al. Alcohol consumption in urban areas among secondary school students in Côte d'Ivoire. In public health. 2014 Jan;26:107-14
- [7] Befinoana. Tobacco and alcohol habit among adolescents attending school in Madagascar [Thesis]. Human Medicine: Mahajanga; 2010. 122 p.
- [8] Befinoana, Razanamihaja N. Tobacco use and associated factors among school-going adolescents in Madagascar. Public health. 2011;23(6)465-74
- [9] Spilka S, Le Nézet O. Alcohol, tobacco, and cannabis during the “high school years”. Results of the ESPAD survey (European School survey Project on Alcohol and other Drugs) 2011, OFDT. 2013 November;Trends;n°89:1-8
- [10] Laqueille.X, Launay. C, Kanit. M. Cannabis-induced psychiatric and somatic disorders. Ann Pharm Fr,2008;66:245-54
- [11] WHO. Health promotion glossary. [Online] Geneva: WHO, 1999 [Accessed 03 July 21]; 25p:7. Available at the URL: <http://www.quebecenforme.org/>