Circumstances and Academic Achievements among Young Moroccan Cannabis Users

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Abstract: Cannabis may cause cognitive and emotional deficits and correlation between substance use and academic performance was positive at the school level. The aim of this survey is to determine the circumstances and predisposing factors of cannabis use in young students of a vocational training institute in Mohammedia (North West of Morocco). The present study is a cross-sectional study conducted among 460 students (245 males and 215 females), aged 18 to 26 years. Addiction status was evaluated by the CRAFFT-ADOSPA questionnaire, cannabis abuse was tested by CAST and the academic achievements are recorded using the annual average. Results showed that Out of a total of 441 students, 29.5 % are drug users, 10.8 % of them are girls. The most commonly used drug is cannabis (81.53% of all drug users). 24.5 % of these addicted students had academic achievements below the average and, 69 % of students ranked bottom of the class are among the drug addicts. Drug and especially cannabis are used at a very early age in schools and between friends in the absence of concept of danger. Academic achievements appeared to be negatively influenced by regular drug use among students.

Key words: Cannabis · Circumstances of First Use · Predisposing Factors · Academic Achievements

INTRODUCTION

Globally, among the world population aged 15-64, it was estimated that in 2012, between 162 million (3.5%) and 324 million (7%) people, had used an illicit drug at least once in the previous year; and between 125 million (2.7%) and 227 million (4.9%) people were estimated to have used cannabis [1]. In 2013, it was estimated that a total of 246 million people, or 1 out of 20 people between the ages of 15 and 64 years, used an illicit drug; that represents an increase of 3 million over the previous year but, because of the increase in the global population, illicit drug use has in fact remained stable [2]. Epidemiological studies estimate that 10% of people are "Addicts" among regular consumers [3]. Substance use disorders are one of the future challenging problems to

Arab countries and research in this field was largely neglected in the past; however, recent research interest was observed [4]. In Morocco, the prevalence of cannabis use of young aged 15-17, is 6% [5]. Adolescence is a period of life characterized by significant changes (Physical, cognitive, emotional and relational...) that occur over a short period and are accompanied by an identity crisis duration and variable intensity [6]. They seek approval from their peers which, in turn, can induce conflict or risk-taking behaviors such as smoking [7]. In the literature, it's always cited that Cannabis may cause cognitive and emotional deficits [8-11] mainly if associated with regular use commencing during adolescence [12] and especially for heavy cannabis use before age 15 when the brain is still maturing phase [13]. Today, in most European countries, residential treatment

program form an important element of the range of treatment and rehabilitation options for drug users [14]. Morocco is among the five countries in the MENA (Middle East and North Africa) who received opioid substitution therapy, including methadone since 2009 [15] but there is no rehabilitation center [16]. For cannabis, pharmacological treatment is currently unavailable [17-19]. The objective of this study is to determine the age and circumstances of the first dose of cannabis among young students in a Vocational Training Institute in Mohammedia (North-west of Morocco).

MATERIALS AND METHODS

Epidemiological Study: This study was conducted among 460 students (245 males and 215 females), aged from 18 to 26 years, which are individually questioned about their consumption of different kinds of drugs. Addiction status was evaluated by the CRAFFT-ADOSPA questionnaire. While the cannabis use disorder was identified using the CAST.

CRAFFT-ADOSPA Questionnaire: The ADOSPA Questionnaire (Adolescents and Psychoactive Substances) [20] French version of CRAFFT (Car Relax Alone Forget Family or friends Trouble), is administered as an interview to identify the harmful use of multiple substances (Alcohol, drugs, etc.) and conditions of use. This scale contains six items and is listed in two categories "Yes" and "No." It concluded to three types of risk: low (0-1 point); moderate (2 points) or high ($\geq$ 3). This test has been validated: the sensitivity was 90.3% (With a specificity of 77.7%) for a score $\geq$ 2. A person is considered addicted if at least, two affirmative answers indicate a harmful psychoactive substance use. A score $\geq$ 2 in CRAFFT-ADOSPA survey indicates high risk of substance use. This questionnaire was originally developed and validated in the United States [21, 22].

Cannabis Abuse Screening Test (CAST): The Cannabis Abuse Screening Test (CAST) is a tool used to identify cannabis abusers. It has been under development at the OFDT's general population survey unit since 2002. CAST aims to describe and estimate problem of cannabis use from data collected using epidemiological surveys of the general population. Today, it is one of the most frequently used tests among young people, especially as part of the ESPAD survey (European School Survey Project on Alcohol and other Drugs) [23]. It is a 6-item

scale which refers to the last 12 months. We exploited the binary version. Based on balanced sensitivity and specificity, the optimal cut-off scores for both cannabis dependence and cannabis use disorders were 2, this test was effective in the evaluation of disorders related to cannabis use in adolescents and young adults [24, 25]. A score > 4 indicates a high risk of cannabis use.

Academic Achievements: Among the 460 students recruited in the first year, 19 students have left the Institute. So, at the end of the second year, we could work only on the remaining 441 students. The academic achievements were recorded using the annual average in June 2014.

Circumstances of the First Time Use of Cannabis: The cannabis regular consumers were asked to complete another questionnaire. The questions focused on the circumstances of the first time use and the factors influencing the practice.

Among the 100 males and 6 females' cannabis addict, we could recruit only 50 males' volunteers.

RESULTS

Diagnosis of the Consumption of Psychoactive Substances by Students: Out of a total of 441 students of the second year, there were 130 (29.48%) drug users, including 14 females (10.77%). Out of them, there were, 106 (81.53%) cannabis users including 6 females (5.66%). The most commonly used drug was cannabis rolled into cigarettes (Hashish). These drugs were used regularly at least once a day and especially at night before bed to facilitate sleep. The kinds of substances used depend also on socio-economic level of students; the students from rich families consume up to 12 joints a day against some puffs of joint shared by many consumers for poor students. In addition, the poor students consume some local cannabis-based preparation called "Maajoune" or "Cala". Alcohol consumption was casual during weekends or ceremonies [26].

CRAFT-ADOSPA: Results showed 130 PAS users. All of these students present a high risk of substance use with an ADOSPA score of 4.

Cannabis Abuse Screening Test (CAST): Results showed 106 cannabis users. All of these students present a high risk of cannabis use with a CAST score > 4.

Table 1: Circumstances of the first use of cannabis

Circumstance	% (n=50)
At school	98 (n=49)
Shared between friends	82 (n=41)
After a regular smoking	84 (n=42)
Freely or offered by friends	94 (n=47)
Never followed by regrets	100 (n=50)

Table 2: Age of the first-time use of cannabis

Age of first-time use	% (n=50)
From 11 years	8 (n=4)
15 to 16 years	88 (n=44)
17 to 18 years	4 (n=2)

Table 3: Installation of dependence after regular cannabis use

Dependence	% (n=50)
From the first use	64 (n=32)
After a week of regular use	22 (n=11)
After a month of regular use	14 (n=7)

Table 4: The factors that drive them to drug use

Factors related to parents and administrative staff	Factors inherent in the consumer himself	Factors affecting the consumer environment
Lack of communication	no visibility on the future	Bad entourage
Lack of awareness	Bored and vacuum	Easy access to drug
Lack of control	Imitate adults	Solidarity between consumers
Sub estimates	Pleasure	
Disrespect		

Table 5: What students need to stop drug use?

Alternative activities	Motivation and reward	Environment changes
Sport activities	Restoring self-esteem	Remoteness drug their looks
Having a game room	Lighten future way	Obtain fun to live in the school and not see it as a prison.
Outings, competitions	Opportunity to reveal professional or artistic talents.	

Academic Achievements: Observing their annual average in the school, we found that among the drug addicts, 35.37% (n=156) were ranked last. 24.5% (n=108) had a score below the average, 69.23 % (n=9) of the 13 classes had their last class students among drug addicts. 68 % (n=300) of all students in the school who did not have the average, were drug addicts. Among the 13 top of each class, there was 1 addict (7.7%) and 2 weaned (15 %).

Out of the 13 classes, there was also a special class of rowdy students, in which there are at least 25 (71.42%) addicts on effective of 35. Their grades were as follows: 40% (n=14) of all 35 rowdy students, had a score below the average, including one (7.14%) no psychoactive consumer. Among the 7 top of the class, there was one addict (14.28%) and 1 weaned (14.28%).

Circumstances: The results show that the first use of cannabis occurs at school, where it was shared between friends and freely in the most of cases or offered by one of these friends. Always, the regular smoking is followed by dependence and never by regrets. Moreover, this first use took place during adolescence or early adolescence; the high rates are registered at 15 to 16 years. Most students are unable to determine the real cause of trying this substance for the first time, but most of them approve that the lack of parental control, bad company and a lot of spending money (Although the families aren't wealthy) are respectively factors that contribute to this experience. The percentages are postponed on the Tables 1 to 3.

The students were also asking for the factors that push them to the addiction or to the cessation. Their responses are reported on Tables 4 and 5.

DISCUSSION

The aim of this study was to determine the circumstances of cannabis use.

The rate of males addict, is very high according to the prevalence of cannabis use (5.7%) founded by Medspad Morocco [5] and to the world prevalence (4.9%) [1]. However, with declining risk perception and increased availability, use and youth initiation may increase [1] without feeling regret. This addiction might be due to the presence of other co-morbidities [18, 27] and to stress [28] generated by the school and the internship system. But, a recent study reveals that nearly 30% of students reported ever having used marijuana at college entry [29]. So, the very early age (From 11 years) of the initiation of cannabis is also correlated with many studies [29, 30] current use of cigarettes and alcohol were associated with a higher likelihood of initiating marijuana use during freshman year [29]. All of the students say they were at first regular smokers. 72.8% reported onset of tobacco before cannabis [31, 32]. Cannabis psychological dependence is very high; more than half of users become addict after the first-time use. School and friends are the most influencing adolescent behavior especially for addiction. Across ages, initiation was predicted by smoking, frequency of marijuana offers and poor grades [33]. Young people are generally highly influenced by their environment mainly if they are far than their parents. A study conducted on Nigerian Undergraduates, showed that family and peer influence were the only predisposing factors to using drugs [34]. Another study, inspired by Howard Becker's classical model of deviant careers, demonstrated that social interaction may both motivate cannabis use and serve as a protective factor against extensive, problematic use [35]. So, families shall take necessary precautions regarding the environments, where the individual might gain wrong experiences after a planned school environment [36]. More, Cessation was more likely among adolescents in less disadvantaged and more cohesive neighborhoods [37]. Young students need attention, motivation, respect and esteem. Some of them consider the boarding school as a prison or a punishment from parents getting rid of their children. A quarter of these junkies have grades below the average and 2/3 of students who did not have the average, were drug addicts. These results show the positive correlation between substance use and academic performance at the school level [38]. Paradoxically, one addict student was ranked Among the 13 top of each class, this can be explained by the fact that some students use drugs as a

doping during examinations; and this applies also to other drugs and other countries. Thereby, some people use khat for performing better in exams [39]. Thus, we find that As well, it is widely discussed in the literature that regular cannabis use increases the risk of learning difficulties [40, 41]. In fact, drug abuse leads to psychological dependence on that drug and affects personal and social performance of the individual [42].

CONCLUSION

This study is a preliminary investigation that lighted the problem of cannabis first-time use and the factors causing and/or influencing this addiction, among students in this vocational training institute. It allows us to conclude that the drug is used at a very early age in schools and between friends, in the absence of concept of danger. The prevention of this plague may be facilitated by family and school students coaching and sensitization to drugs danger since primary school in one hand and by creating a double communication between young and adults at home and in school, especially by increasing leisure spaces both in and out of school in the other hand. So, deeper researches must be realized about other kinds of drugs in order to determining adequate methods of psychotherapy against this practice considered as a public health problem.

Conflict of Interest: None

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