

The Mediterranean School Survey Project on Alcohol and Other Drugs in Morocco

Fatima El Omari^a

Mohammed Vth University, Rabat Medical School, Morocco

Jallal Toufiq^b

Mohammed Vth University, Rabat Medical School, Morocco

Abstract

Drugs remain a matter of concern in Morocco, although it is illegal and forbidden in Islam. Epidemiologic studies previously conducted in Morocco indicate that drug use is increasing among the youth and women. To conduct well-designed surveys on drug use in schools, Morocco adopted the MedSPAD (Mediterranean School Survey Project on Alcohol and Other Drugs), which is supported by the Pompidou Group of the Council of Europe. This project includes countries like Algeria, Morocco, Lebanon, Tunisia, and Egypt, and encompasses the mandatory school-going-age group of 15- to 17-year-olds in Mediterranean countries. In Morocco, following a pilot survey in 2003, MedSPAD surveys were conducted in two big cities (Rabat and Salé), before the first nationwide study was undertaken in 2009 and the second in 2013. The objectives of the Moroccan MedSPAD were to determine the prevalence of substance use among 15- to 17-year-old youths; to determine the age of onset of drug use; and to learn about teenagers' knowledge, perspectives, and behaviors regarding drugs. The project sought to identify some of the predictive factors of drug use to aid in devising strong policies for facilitating mental health support and drug prevention in Moroccan schools. MedSPAD surveys demonstrated students' extensive drug use. The surveys found initial drug use since a young age, which suggests that preventive and counseling programs need to be implemented for very young students (elementary school), prior to onset. The development of effective school prevention policies and community intervention programs (prevention, treatment, and rehabilitation) may need immediate attention. Similar surveys need to be conducted to observe drug use trends among the Moroccan youth.

Keywords: Psychoactive substance • Misuse • Youth • School • Prevention

a Corresponding author

Prof. Fatima El Omari (PhD), Centre Psychiatrique Universitaire Arrazi, BP 36, Rue Ibn Rochd, 11005, Salé, Maroc (Morocco)

Research areas: Psychiatry; Addictology

Email: fatima_elomari@hotmail.com

b Jallal Toufiq (PhD), Centre Psychiatrique Universitaire Arrazi, BP 36, Rue Ibn Rochd, 11005, Salé, Maroc (Morocco)

Research areas: Psychiatry; Addictology

Email: jtoufiq@yahoo.fr

Recent epidemiologic surveys indicate that substance use by the youth of many countries remains a matter of concern. Although illegal and forbidden by religion, alcohol and drugs are available in many Muslim countries. Epidemiologic studies conducted in Morocco indicate that drug use is increasing among the youth and women (El Omari, Sabir, & Toufiq, 2014; l'Office des Nations Unies Contre la Drogue et le Crime, 2007; Toufiq & El Omari, 2006; Toufiq, El Omari, & Sabir, 2011; Toufiq, Othmani, Ktiouet, & Paes, 1997).

MedSPAD (Mediterranean School Survey Project on Alcohol and Other Drugs) was established after a conference organized by the Pompidou Group of the Council of Europe on co-operation in the Mediterranean region in 1999, which showed the need for better understanding of drug use among adolescents and young adults in the region (Mabileau-Whomsley, 2005). MedSPAD is an adaptation of ESPAD (European School Survey Project on Alcohol and other Drugs), which conducts surveys in approximately 36 European countries. MedSPAD conducts cross-sectional surveys in schools, which encompass 15- to 17-year-olds in the Mediterranean and North Africa, to improve knowledge about youth drug use. MedSPAD surveys have been conducted in countries around the Mediterranean basin (Bless & Muscat, 2004), such as Algeria in 2005, Lebanon in 2008 (Adib, Bejjani, El Bcheraoui, & Challita, 2009) and Tunisia in 2013 (Ben Salah et al., 2014), (Because of the geographical proximity and cultural similarities, these surveys can be used to compare data between countries.

MedSPAD was adopted in Morocco, in response to a joint policy decision by the Ministry of Education and the Ministry of Health, to evaluate the problem of drug use among young people and to draw up appropriate recommendations for evidence-based prevention policies.

The Moroccan MedSPAD survey was entrusted to two joint teams from the Ministry of Education and Arrazi University Psychiatric Hospital in Salé. After conducting a pilot study in Rabat during 2003 ($n = 400$) (Mabileau-Whomsley, 2005) in order to assess the feasibility and validity of the survey, a full survey was conducted in two big cities (Rabat and Salé) on a sample of 1117 youths during February 2006 (Toufiq & El Omari, 2006). The first country-wide survey was launched in December 2009 and included a representative sample of 6371 Moroccan high school students (Toufiq et al., 2011). The second national MedSPAD was launched during May 2013, and included a sample of 5801 students.

The objectives of the Moroccan MedSPAD were to assess the prevalence of substance use among 15- to 17-year-old students in Moroccan high schools, and to establish the age at onset of drug use. The survey sought to understand teenagers' points of view and behaviors regarding drugs, and to identify some of the predictive factors of drug use that might serve as a basis for framing recommendations and taking action related to drug prevention policies in schools. Further surveys would help to indicate the tendency of drug use among Moroccan youths.

Method

Sampling/Study Population

MedSPAD is a cross-sectional survey, conducted using a representative sample selected through the Grape sampling method. Participants in the 2006 MedSPAD city surveys were recruited from public urban high schools in two Moroccan cities (Rabat and Salé). The high schools were randomly selected and 15- to 17-year-olds from the three last grades (10th, 11th, and 12th), were included. The total sample size was $n = 2139$ students (Toufiq & El Omari, 2006).

In the national MedSPAD surveys (2009 and 2013), participants were also recruited from randomly selected Moroccan schools and 15- to 17-year-olds from the four last grades (9th, 10th, 11th, and 12th) were included (Toufiq et al., 2011).

Data Collection Tools

The instrument used was an anonymous, self-administered questionnaire modeled on the ESPAD survey (Ben Salah et al., 2014). The questionnaire was translated into Arabic and was revised several times, then reworked in relation to the questionnaire used in the 2003 pilot survey and the one used by the Algerian team, in an attempt to adapt it to the Moroccan context, the Moroccan youth vocabulary, and to include local terms for different drugs. The questionnaire took about 30 minutes to complete. The 2009 and 2013 national surveys were also reworked in relation to the 2006 MedSPAD survey in Rabat-Salé (Toufiq & El Omari, 2006), and items on the use of nargileh,

cocaine, and crack were added. Other items were added to the 2009 MedSPAD questionnaire in order to meet the requirements of the Moroccan Ministry of Education (Toufiq et al., 2011). Questions about heroine and some nicotinic derivatives were also added.

The questionnaire was designed to extract data about different psychoactive substance use, youth socio-demographics, youth behavior at school and home, relationships with parents, parent education, and family socio-economic levels. In MedSPAD 2013, prevalence included lifetime, last 12 months, and last 30 days use of seven substances: tobacco, alcohol, cannabis, non-medically-prescribed psychotropic (sedatives and hypnotic) drugs, cocaine, crack, and heroine. The questionnaire also evaluated young people's perception of what constitutes high risk drug use, attitudes towards drug users, and knowledge and opinions about drugs.

Procedure

Ten voluntary surveyors were recruited from among trainee psychiatrists (residents) from Arrazi University Psychiatric Hospital in Rabat-Salé. They were trained in how to conduct surveys in schools and the same instructions were issued to them regarding the following specific points:

- how to present Ministry of Education authorization to participating schools;
- how to obtain youth verbal consent before conducting the survey;
- how to introduce themselves as independent researchers, rather than as school or Ministry of Education employees;
- how to emphasize the scientific purpose of the survey and the importance of responding sincerely;
- not allowing school staff to participate in the survey, or provide information about drugs, and to ensure only the surveyors were present in class with the students;
- how to randomly choose a class and grade;

- how to respect confidentiality;
- how to complete school survey evaluations for each class (i.e., number of those present, absent, refusals, events, questions, and time taken).

For ethical reasons, the survey was not carried out until the Ministry of Education had given its official agreement. Youth verbal consent was required to participate in the survey.

The timing of the survey was not random. To avoid bias, a period of time was chosen when there were no examinations, no religious festivals, or school holidays.

Statistical Analysis

The MedSPAD data was analyzed using the SPSS software application. After basic contingency table analyses, a bivariate analysis was employed to analyze the relationship between each student's characteristic variables and substance use, which were also assessed via chi-squared tests. The "gender" variable was incorporated into the study of the prevalence of psychoactive substance use. We used the chi-squared test and the Student "t" test in the comparative studies. In the study of associations, we used the odds ratio (OR) test. The significance threshold was determined by the variable "*p*," which was deemed significant when $p < .005$. Only data concerning 15- to 17-year-old students are presented in this paper.

Sponsoring

This research is supported by the Pompidou Group of the Council of Europe. It is a collaborative work between Arrazi University Psychiatric Hospital in Salé and the Moroccan Ministry of Education. The Moroccan Ministry of Education provided logistic support for conducting the MedSPAD.

Results

The Moroccan MedSPAD surveys found psychoactive substance use to have a higher prevalence among boys than girls (see Table 1). In addition, drug preferences were seen to differ according to gender among the 15- to 17-year-olds. Tobacco was the most used substance, followed by alcohol, then cannabis in the case of boys, and non-medically-prescribed psychotropic substances (sedatives and hypnotics) in the case of girls. Cocaine, crack, and heroine came last, and were little used among the pupils surveyed. Drugs freely available, and those that were the easiest to obtain were the substances most used by the pupils (tobacco, alcohol and psychotropic substances in the case of girls). The predominance of use among boys and the difference in preferences may be explained by the relative ease with which boys can obtain drugs. The downward trend in the prevalence curves for all of the psychoactive substances and the frequency of substance use points to experimental phase use of substances. These findings were similar across all Moroccan MedSPADs.

The data revealed that 15- to 17-year-old boys consume more than girls, and prevalence increases significantly with age ($p < .0001$). For example, data from MedSPAD 2009 showed that during a lifetime, nargileh or chicha were the drugs most used by 15- to 17-year-old students (19.4%, $n = 853$). Tobacco prevalence was 18.4% ($n = 830$) (27.7% male, 10.4% female). The lifetime prevalence of alcohol was 7.7% ($n = 348$) (11.8% male, 4.2% female). Cannabis was consumed by 7.2% (12.5% male, 2.5% female), and psychotropic drugs (sedatives) by 4% ($n = 182$; 4.8% male, 3.4% female). Cocaine was used by 1.2% (2% male, 0.5% female), crack by 0.7% ($n = 31$; 1.1% male, 0.3% female). Other illicit drugs, cited as opiate substances, ecstasy, and inhalants, were consumed by 5.8%. The frequency of substance use showed that youths are in the experimentation phase of use of different substances.

Table 1
Morocco MedSPAD Prevalence of Psychoactive Substance Use According to Gender

		Rabat-Salé MedSPAD 2006 (n = 1117)		Morocco MedSPAD 2009 (n = 6371)		Morocco MedSPAD 2013 (n = 5801)	
		Boys	Girls	Boys	Girls	Boys	Girls
Tobacco	Lifetime	19.5%	10.2%	27.7%	10.4%	20.1%	5.9%
	Last year	18.5%	4.9%	10.7%	5.1%	10.6%	1.8%
	Last 30 days	13%	2.9%	9.8%	3.1%	6.8%	0.9%
Alcohol	Lifetime	16.6%	4.7%	11.8%	4.2%	7.6%	2.8%
	Last year	9.2%	2.5%	6.9%	1.9%	3.9%	1.2%
	Last 30 days	5.8%	0.2%	4.5%	0.8	3.1%	0.6%
Cannabis	Lifetime	12.5%	1.5%	12.9%	2.5%	9.5%	2.1%
	Last year	9.2%	0.7%	8.5%	1.3%	6.4%	0.7%
	Last 30 days	5.8%	0.5%	5.1%	0.6%	5.8%	0.6%
Sedatives	Lifetime	9.5%	8.5%	4.8%	3.4%	4.4%	4.1%
	Last year	4.5%	3.7%	2.7%	1.7%	3.3%	2.9%
	Last 30 days	3.4%	3.1%	1.7%	1%	2.2%	1.5%

According to all the MedSPAD surveys, the age at onset of substance use seems to have been more and younger. In MedSPAD 2013, the mean age at onset of tobacco use was 14.2 ± 1.7 . It was 14.5 ± 1.8 for alcohol, 14.9 ± 1.4 years for cannabis, and 14.8 ± 1.6 years for psychotropic drugs.

Students seemed to be increasingly familiar with drugs. According to MedSPAD 2013, over 9 of every 10 pupils questioned (93%) had already heard about alcohol; 91% knew about hashish, and 89% were familiar with non-medically-prescribed sleeping pills and sedatives. The main sources of information about the dangers of alcohol and drugs cited in MedSPAD 2009 were the internet (63.4%) and the media (60%). School programs represented only (37.4%). In MedSPAD 2013, the main source of information about drugs was the media (48%) and the internet (26%). Only 17% of students learned about drugs via school programs.

About 25–50% of students did not perceive taking drugs to be a high risk. While not always statistically significant, in general, the perception of risk appeared to be related to less drug use.

All the Moroccan MedSPAD surveys showed a significant correlation ($p < .001$) between drug use and some variables. Substance users were more likely to obtain low grades in the last semester, be absent from class, spend nights away from home without parent authorization, be dissatisfied with relationships

with parents and friends, lack knowledge about drug use risk, and have a family member or friend who used the same drug. The surveys did not find a significant correlation between parents' education, family socio-economic level, and rural or urban residence, and youth drug use. These factors could, thus, be predictive of drug use, and should draw the attention of parents and educators.

Discussion

Psychoactive substance use affects secondary school youths in Morocco. Prevalence rates are almost similar to those found in neighboring Algeria and Tunisia (see Table 2), but are lower than those reported in the MedSPAD Lebanon survey (Adib et al., 2009; Ben Salah et al., 2014). They are also much lower than the rates found among young Europeans or Americans (Hibell et al., 2011; National Institute on Drug Abuse, 2012).

Table 2
Drug Use Prevalences according to Different MedSPAD

		Alger MedSPAD 2005 (n = 1894)		Lebanon MedSPAD 2009 (n = 1097)	Tunisia MedSPAD 2013 (n = 5437)		Morocco MedSPAD 2013 (n = 5801)	
		Male	Female		Male	Female	Male	Female
Tobacco	Lifetime	40.5%	10.2%	10.1%	42.7%	10.1%	20.1%	5.9%
	Last year	26.3%	4.7%		25.6%	2.8%	10.6%	1.8%
	Last 30 days	22.6%	3.2%		18.7%	1.8%	6.8%	0.9%
Alcohol	Lifetime	13.6%	3.0%	34.6%	13%	1.6%	7.6%	2.8%
	Last year	7.5%	1.1%	28.6%	8%	0.6%	3.9%	1.2%
	Last 30 days	6.1%	0.9%	20.6%	5.4%	0.4%	3.1%	0.6%
Cannabis	Lifetime	17.0 %	1.2%	6.8%	3.5%	0.2%	9.5%	2.1%
	Last year	12.7%	0.6%	4.14%	1.8%	0.05%	6.4%	0.7%
	Last 30 days	9.5%	0.6%	2.2%	1%	0.05%	5.8%	0.6%
Sedatives	Lifetime	14.9%	12.6%	3.3%	2.2%	2%	4.4%	4.1%
	Last year	9.2%	7.2%	2.2%	1%	1.2%	3.3%	2.9%
	Last 30 days	6.9%	5.7%	1.2%	0.7%	0.8%	2.2%	1.5%

The findings on the early age of first drug use should give cause for concern. It suggests that there should be a call for the implementation of prevention and awareness-raising programs at an early stage for the youngest group, given that the drugs most used by pupils are those easier to obtain, such as tobacco and alcohol. The implementation of drugs-use policies in primary schools seems necessary in order to prevent drug use.

It also seems essential for preventive measures to be taken within this age group to avoid progression from the experimental use of psychoactive substances to a stage of addiction and psychiatric or infection-related complications (El Omari et al., 2014; Toufiq & El Omari, 2006; Toufiq et al., 2011).

Some aspects of pupils' behavior correlated in a statistically significant way with drug use; such as missing school, staying away from home, obtaining below-average grades, and being dissatisfied with parental relations. These factors might, therefore, be predictive of drug use, which should help in the development of evidence-based prevention programs to include families and schools.

There were several limitations to this study: there was no evaluation of problems linked with substance use, such as abuse or dependence criteria, and there was no estimation of youth risk behavior. The harm associated with substance misuse in young people includes injury, violent behavior, sexual risk-taking, sexually transmitted diseases such as HIV, drink-driving, binge drinking, overdose, toxicity, and death. Our study is the first in Morocco to evaluate drug use among 15- to 17-year-olds. Conducting similar surveys should help to establish drug-use trends among the Moroccan youth.

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