

Johnson, Bassin & Shaw, Inc.

April 21, 1997

Maria Elena Medina-Mora, Ph.D. Instituto Mexicano de Psiquiatría Calz. México-Xochimilco No. 101 Col. San Lorenzo Huipulco C.P. 14370, Mexico, D.F.

Dear Dr. Medina-Mora:

Thank you for participating in the December 1996 meeting of the Community Epidemiology Work Group held in Austin, Texas. Enclosed is an unbound copy of your report as it will appear in the December 1996 Proceedings. You should receive a bound copy of the Proceedings in the next few months.

If you have any questions, please do not hesitate to call either one of us at (301) 495-1080.

Sincerely,

Sabina A. Murphy

Project Associate

Enclosure

DRUG USE AMONG STUDENTS IN MEXICO'S NORTHERN BORDER STATES

Maria Elena Medina-Mora
Jorge Villatoro
Estela Rojas
Instituto Mexicano de Psiquiatria

Mexico City, Mexico

This paper presents data on prevalence of drug use and variables related to drug initiation obtained through a national high school survey (N=61,779) that included information for the border States (N=13,450). Results show that inhalants were the most frequently mentioned drugs "ever used"; amphetamines and other stimulants were second in preference, showing higher rates of use in the last year than inhalants in all States except Tamaulipas. Cocaine use was higher than the national average in Baja California and Sonora, but lower in Coahuila and Tamaulipas. Perceived risk, social tolerance, drug use within the family, peer use, perceived availability, depression, and suicidal ideation were variables that differentiated users from non users. These variables plus age were associated with continuous use, while use of more than one substance was associated only with gender, friends using drugs, perceived availability, and suicidal ideation.

INTRODUCTION

The border with the United States presents two different features. The level of development in boundary States, as a whole, is higher than the average level in the country: for example, life expectancy in the southern State of Chiapas, one of the poorest States in the country, equals that reached in Nuevo Leon, a border State, 22 years ago (Frenk et al. 1994). At the same time, the border cities present major health and social problems linked to an important discrepancy with the quality of life and poverty levels on both sides of the border; more people are reaching these cities with the hope of crossing the border; and drugs are increasingly available.

The data presented in this paper are drawn from a national school survey that included information on a State basis. The paper compares border States to the national average. It also describes prevalence of drug use and individual and environmental

variables that distinguish students who do not use drugs from those who have experimented with substances, those who have continued using drugs, and those who have used more than one drug. Previous papers have analyzed this information at a national level and for other regions (Medina-Mora et al. 1995; Villatoro et al. unpublished; Medina-Mora et al. 1995). This paper discusses similarities and differences.

Substance abuse in Mexico presents some interesting features. While being a drug-producing country and a supply route for cocaine shipped from South America to the United States, Mexico's rates of drug use are, though not unimportant, lower than those observed in the United States (National Institute on Drug Abuse 1990; Secretaria de Salud 1991, 1993). Since the first cross-cultural comparisons between Mexican students from

Monterrey, Nuevo Leon, and U.S. students from Houston, Texas, prevalence rates of drug use have been shown to be lower in Mexico (Wellish and Hays 1974; Johnston et al. 1985; Castro et al. 1986). Surveys undertaken in Mexico have shown rates of drug use are higher in the northern border regions, particularly for hard drugs such as heroin and cocaine (Medina-Mora 1978; Terroba and Medina-Mora 1979; Castro et al. 1986). Surveys and other sources of information also show that the prevalence of drug use in the border area varies, with the northwestern States (Baja California, Baja California Sur, and Sonora) presenting the highest rates, and the eastern States presenting lower rates than the country's central regions (Castro et al. 1986; Centros de Integracion Juvenil 1982; Secretaria de Salud 1991, 1993). In the survey conducted by Tapia and Cravioto, from the General Directorate on Epidemiology within the border cities, the same trend was observed, with rates for "ever use" of illegal drugs varying from 10.1 percent in Tijuana to 8.9 percent in Ciudad Juarez to 5.8 percent in Matamoros (Secretaria de Salud 1993).

Statistics from the specialized treatment centers for drug addicts also show that while the national average for patients treated for heroin use in 1995 was 5.3 percent, in border city treatment centers the proportion was considerably higher, reaching 33 percent of the patients in Tijuana and 20 percent in Mexicali, both in Baja California. Cocaine use among patients at treatment centers in this region reached proportions above 66 percent in

these two centers and 59.7 percent in Ciudad Juarez, while the national average was 32.4 percent (Centros de Integración Juvenil 1996).

Another interesting finding relates to the use of methamphetamine, which was reported as one of the six main drugs of abuse in 1995 at treatment centers in this region and was practically nonexistent in other regions. The most affected population was detected in Tijuana, where 42 percent of the patients reported methamphetamine use, and 18 percent of the patients had used it in the previous 30 days. Rates of "ever use" in Mexicali were considerably lower (7 percent), and the national average was 2.7 percent (Centros de Integracion Juvenil 1996). Finally, various surveys show the important relation of drug experimentation and abuse with the continuous movement of the population between the two countries. The United States and Baja California are important places where drugs are used for the first time by Mexicans living in different regions of Mexico (Hernandez and Sanchez 1985; Suarez-Toacedo 1978; Secretaria de Salud 1989, Medina-Mora et al. 1993).

All these surveys show lower drug use rates in Mexico than in the United States, although these rates are increasing. The surveys also show important differences among the border cities. The northwestern States have higher rates than those in the east, where rates are even lower than in the central part of the country.

METHOD

The main data source for this report is the 1991 Encuesta Nacional de Uso de Drogas en la Comunidad Escolar (National Survey on Drug Use in the School Community). This survey, conducted among high school students, provided the data on a State basis for the first time. The data are analyzed by region and by individual States comprising Baja California (n=2,611), Sonora (n=2,477), Chihuahua (n=2,340), Coahuila (n=2,695), Nuevo Leon (n=2,132), and Tamaulipas (n=2,013). The sample design was stratified, with two stages of selection and by conglomerates; schools and groups within the selected schools were the units of sampling in the two stages. A total of 2,330 groups were selected, and 61,779 students answered the questionnaire. Of these, 13,450 lived in a border State and were thus included in this paper; 50.8 percent were males and 48.6 percent were females; 77 percent were younger than 15 and 95 percent were age 17 or younger; 77 percent were studying in urban schools and 19 percent in rural regions; 9 percent of the heads of families had no formal education, 36 percent had studied for 1-6 years, 21 percent for 7-9 years, 12 percent for 10-12 years, and 14 percent for 13 years or more.

The information was gathered through a standardized questionnaire completed in an average of 40 minutes. Previously tested for validity and reliability (Medina-Mora et al. 1981; Castro 1987), the instrument includes the core items suggested by the World Health Organization (WHO) for self-administered questionnaires (Smart et al. 1980), and has been used in most student surveys conducted in the country

for the last 22 years. For this study, additional items were included: perceived availability of drugs, social tolerance, and perception of risk were taken from the Monitoring the Future Survey (Institute on Social Research 1987); and depression was studied through the Center of Epidemiological Studies Depression Scale (CESD-A), a version for adolescents that includes four items on suicidal ideation proposed by Roberts (1980) and proved in Mexico in previous studies (Marino et al. 1992).

The questionnaire gathers information on use of tobacco, alcohol, marijuana, inhalants, cocaine, crack, heroin, hallucinogens, nonprescribed amphetamines and other stimulants, tranquilizers, and sedatives; tobacco and alcohol are not included in this analysis. Nonusers were defined as those subjects who reported never experimenting with drugs excluding tobacco and alcohol (92 percent); experimenters were those who reported having experienced the effects of one or more substances other than tobacco or alcohol from one to five times (5.9 percent); users were those who had used one or more drugs more than five times (1.8 percent); multiple drug users reported having used more than one substance (2.0 percent); and 5.7 percent reported use of only one substance. Association between variables was tested by submitting the data to a multiple logistic regression analysis using SPSS 6.1.3 for Windows.

Previous analysis (Medina-Mora et al. 1995) has demonstrated that in this sample of high school students, the selection of drug type is determined by demographic variables and not affected by the interpersonal and contextual variables included here; thus, for this paper, drug use was considered as a unique category. Published data from the above-mentioned study show that the risk of consuming cocaine was significantly higher among students whose parents had more education and among student who had worked the

previous year, while use of solvents was associated with being younger, being male, and having a head of the family with low educational status. Gender was the only variable that influenced the risk of using nonmedical drugs, which were more frequently reported by males, and medical drugs, which were more often reported by females.

RESULTS

1. Extent of Substance Use

Inhalants are the most frequently mentioned "ever-used" drugs, and amphetamines and other stimulants are the second choice, showing higher rates of use in the last year than inhalants in all States except Tamaulipas (exhibit 1). Cocaine use is higher than the national average in Baja California and Sonora, but lower in Coahuila and Tamaulipas.

Drug use is, in general, more prevalent among males, but females use tranquilizers and sedatives more frequently (exhibit 2). Use of all substances studied increases with age except inhalants, which are more prevalent than other drugs at an early age and less prevalent by age 18. Cocaine is the least frequently used drug among students younger than 18, but among those reaching this age it becomes more prevalent than tranquilizers and amphetamines, and occupies second place after marijuana. Use of tobacco, alcohol, amphetamines and other stimulants, and tranquilizers increases with the educational status of the head of the family, while

solvents and marijuana are slightly more prevalent among students whose fathers had not received formal education.

2. Circumstances Associated With First Use

Inhalants are the drugs of earliest initiation, peaking at age 11–12, followed by tobacco, amphetamines, and tranquilizers, which peak at age 13–14; marijuana shows the greatest elevation at age 15–16, and cocaine at age 15–18. Data also show a trend toward an earlier start, with younger students reporting an average initiation at an earlier age.

Results from the total national sample showed that about one-fourth of the users reported having had their first experience of cocaine (17 percent) and heroin (23 percent) in the United States, which also occupied the first place in terms of mentions. Experience came later in Baja California, Sonora, Sinaloa, and Jalisco, where drug cultivation and traffic has represented an important problem.

3. Differences Between Nonusers and Experimenters

- Personal characteristics—Students who have experimented with drugs differ from those who reported never having tried substances (excluding tobacco and alcohol). Experimenters are older (33 percent versus 21 percent), they more often were not full-time students the year before (29 percent versus 19.8 percent), they have more often worked (29 percent versus 20 percent), and their parents have more education (only 28 percent of the parents of nonusers had attended high school, compared to 35 percent for experimenters). Gender (51 percent were females and 55 percent were males) made no difference in the decision of the students to try drugs; however, males more frequently consumed nonmedical drugs, while females more often used medical drugs illegally. When these variables were introduced into the logistic regression analysis, none of them significantly predicted drug initiation.
- Individual variables—Two types of variables were considered: perceived risk from the cognitive dimension, and depression and suicidal ideation from the affective dimension.

 Perceived risk (exhibit 3) was assessed by asking students if they considered it "very dangerous," "somewhat dangerous," or "not dangerous" to smoke marijuana once or twice, occasionally, or regularly, or to try cocaine, heroin, or amphetamines once or twice or use each one of them on a regular basis.

In response, 32 percent of nonusers perceived drugs as very dangerous, compared with 18 percent of experimenters.

Depression was included in the analysis as a dichotomous variable, above and below the cutoff point of 16 symptoms; and suicidal ideation was introduced as a continuous variable with scores varying from 0 to 4, indicating the number of symptoms reported by the students. Both variables were significantly associated with drug experimentation. While only 25 percent of the nonusers reported symptoms of depression above the cutoff point, 53 percent of the users did so. Similarly, while 68 percent of the nonusers had no symptoms of suicidal ideation, this was true for only 47 percent of the experimenters. Odds ratios for these two variables were highly significant.

Interpersonal variables—Data confirm the hypothesis that drug use is associated with a high exposure in the family context: perhaps fathers and brothers are important role models for this behavior as well as sources for drug supply. Students who experimented with drugs more often reported that their fathers (4 percent) or brothers (17 percent) used drugs. By far the most important variable was peer use: while 51 percent of the experimenters reported having friends who consumed drugs, only 18 percent of the nonusers reported this. These variables were important predictors of drug initiation.

Environmental variables—Two variables were included to test this dimension: perceived availability and social tolerance. Students were asked to report how difficult it would be to obtain marijuana, cocaine, and heroin if they would want to do so. Each item had five options for answering, ranging from "probably impossible" to "probably very easy." A score was produced by adding the responses to three items (marijuana, cocaine, and heroin) and then coding them to form a dichotomy: "nonavailable" (scores from 0 to 3, with 0 indicating "impossible") and "available" (any other score). The variable of perceived availability was significantly associated with drug experimentation: only 26 percent of the nonusers perceived any availability of these substances, compared with 57 percent of the experimenters.

Social tolerance was assessed by asking the students how their friends would react if they experimented or used drugs through the same questions as in the perception of risk scale and with three options for answering: "approved," "neither approved nor disapproved," or "strongly disapproved." The responses to the different items were added and then transformed into a dichotomy: "no tolerance," when all responses indicated that "friends would consider it very wrong," independently of the pattern of use and type of substance; and "tolerance," for any other answer in the scale. This variable was strongly related to drug initiation: 21 percent of the nonusers reported any tolerance from their friends, compared with 41 percent of experimenters.

4. Differences Between Nonusers and Users

The regression model was repeated to test whether the same variables that differentiated between nonusers and experimenters also differentiated nonusers from users, thus distinguishing between factors associated with drug initiation and those that predict continuous use after experimenting.

Age was related to continuous use. The same personal variables that predicted drug initiation were important for continuous use: depression, suicidal ideation, and perceived risk. Data also confirmed the hypothesis that continuous drug use would be associated with the highest exposure in the family (use by fathers and brothers) and peer use. Perceived availability and social tolerance were also related to the decision of the student to continue using after having experimented with the substances from one to five times (exhibit 4).

Differences Between Multiple Drug Users and Users of One Drug

When considering the differences between students who have tried only one substance other than tobacco and alcohol and those who have tried more than one, the importance of the characteristics varies. Age made no difference in this case, nor did other variables that did not predict use in any of the previous models. Depression

was not significant, but suicidal ideation was an important predictor. Perception of risk and social tolerance made no difference in the student's decision to try drugs. The only other variables that were important were gender (males were more at risk), peer use, and perceived availability.

DISCUSSION AND CONCLUSIONS

Results from this analysis confirmed previous observations in the sense that border States have higher rates of drug use than the national average, but also that the States differ from one another: Baja California has the highest rates among the border States and in relation to the national average; cocaine use was higher than the national average in Sonora, but lower in Coahuila and Tamaulipas. This study did not provide information at the city level; however, the difference in development and the sociodemographic situation between the States as a whole and the cities located at the border emphasize the need to conduct research at this level.

When all substances are analyzed together, sociodemographic variables lose their possible importance in the decision of students to experiment with or use drugs. Other variables, such as the perception of risk and drug availability, including the environment where the students develop, are more important. How easy is it for them to get drugs? How is drug use perceived in their environment? Is it tolerated? Are there other people around them using drugs? These variables suggest avenues for dealing with the problem, among them an increase in the emphasis on risk perception as an important element of drug education and reinforcement of low social tolerance.

Another set of important variables were related to the affective dimension. It seems that feeling depressed or having suicidal thoughts are importantly related to drug initiation and continuous use, suggesting a need to identify and deal with these problems within the school system to limit the possibility of students seeking drugs to cope with these feelings.

As evident in previous papers (Medina-Mora et al. 1995; Villatoro et al. unpublished; Medina-Mora et al. 1995), the great majority of the factors differentiated students who have decided to experiment with drugs other than tobacco and alcohol from those who have not done so. Future studies should introduce other variables that could aid in identifying factors related to further drug involvement.

This region differs in various aspects from Mexico City and the national urban population analyzed in previous exercises (Medina-Mora et al. 1995; Villatoro et al. unpublished). In the northern border region, gender does not predict drug initiation. Employment and educational status of the head of the family, which were also important in the previous analysis, played no role in this region. Suicidal ideation was more important, predicting involvement with more than one drug. Variables related to drug availa-

bility and exposure, as well as perceived risk, were important in the three studies.

The results presented here provide some evidence of the important relationship between the drug problems in Mexico and those in the United States, which are

linked to the continuous population movement between the two countries to the status of the drug market. Further studies on these topics should help us understand the dynamics of this phenomenon and thus propose better solutions.

REFERENCES

- Castro, M.E.; Rojas, E.; Garcia, G.; and De La Serna, J. Epidemiologia del uso de drogas en la poblacion estudiantil. tendencias en los ultimos 10 anos. Salud Mental 9(4):40, 1986.
- Castro, M.E. "Manual para la utilizacion del cuestionario sobre el uso de drogas y problemas asociados, dirigido a muestras de estudiantes de ensenanza media y media superior." Reporte Interno, Instituto Mexicano de Psiquiatria, 1987.
- Centros de Integracion Juvenil.

 Investigacion Epidemiologica en
 Carceles. Reporte interno,
 Mexico, 1982.
- Centros de Integracion Juvenil.

 Tendencias del Consumo de Drogas
 1990-1995. Mexico, 1996.
- Frenk, J.; Lozano, R.; and Gonzalez Block, M.A. Economia y salud: propuesta para el avance del sistema de salud en Mexico. Informe final. Mexico D.F., Fundacion Mexicana para la Salud, 1994.
- Hernandez, D.J., and Sanchez, H.S.

 "Investigacion con 108 Usuarios de
 Heroina en la Ciudad de Tijuana."

- Internal report, Centros de Integracion Juvenil, 1985.
- Institute on Social Research. "Monitoring the Future: A Continuing Study of the Lifestyles and Values of Youth."
 University of Michigan, 1987, 1992.
- Johnston, L.L.; O'Malley, P.; and Bachman, J. "Drug Use Among American High School Students and other Young Adults." National Trends Through 1985.
- Marino, M.C.; Medina-Mora, M.E.; Chaparro, J.J.; and Gonzalez-Forteza, C. Confiabilidad y estructura factorial del CES-D en adolescentes Mexicanos. Revista Mexicana de Psicologia 10(2):141-145, 1992.
- Medina-Mora, M.E.; Prevalencia del consumo de drogas en algunas ciudades de la Republica Mexicana. Encuestas de Hogares. Ensenanza e Investigación en Psicologia IV(7):111-125, 1978.
- Medina-Mora, M.E.; Gomez-Mont, F.; and Campillo-Serrano, C. Validity and reliability of a high school drug use questionnaire among Mexican students. Bulletin on Narcotics 33(4):67, 1981.

- Medina-Mora, M.E.; Rojas, E.; Juarez, F.; Berenzon Sh.; Carreno, S.; Galvan, J.; Villatoro, J.; Lopez, E.; Olmedo, R.; and Ortiz, E. Consumo de sustancias con efectos psicotropicos en la poblacion estudiantil de ensenanza media y media superior de le Republica Mexicana. Salud Mental 16(3):2-8, 1993.
- Medina-Mora, M.E.; Villatoro, J.; Lopez, E.K.; Berenzon, Sh.; Carreno, S.; and Juarez, F. Los factores que se relacionan con el inicio, el uso continuado y el abuso de sustancias psicoactivas en adolescentes Mexicanos. *Gaceta Medica de Mexico* 131(4):383-393, 1995.
- Medina-Mora, M.E.; Villatoro, J.; and Berenzon, Sh. Explanations of adolescent drug initiation in urban areas of Mexico. Paper prepared for the 37th Congress on Alcohol and Drug Dependence. International Council on Alcohol and Addictions, San Diego, Calif., 1995.
- National Institute on Drug Abuse.

 "Overview of the 1990 National
 Household Survey on Drug Abuse."

 NIDA Capsules, 1990.
- Roberts, E. Reliability of the CES-D scale in different ethnic contexts. *Psychological Research* 2:125, 1980.
- Smart, R.G.; Hughes, P.H.; Johnston, L.D.; Anumonye, A.; Khant, U.; Medina-Mora, M.E.; Navaratnam, V.; Poshyachinda, V.; Varma, V.K.; and Wadud, K.A. A methodology for student drug use surveys. WHO Offset Publication 50:5, 1980.

- Secretaria de Salud. Direccion General de Epidemiologia. Instituto Mexicano de Psiquiatria. "Encuesta Nacional de Adicciones." Mexico, 1989, 1991.
- Secretaria de Salud. Direccion General de Epidemiologia. "Encuesta Nacional de Adicciones." 1993.
- Secretaria de Salud. Direccion General de Epidemiologia. "Encuesta sobre el Consumo de Droga en La Frontera Norte de Mexíco." 1993.
- Suarez-Toacedo, J.E. "Farmacodependencia a Heroina. Estudio en un universo cerrado. Penitenciaria de Baja California, Mexico." Internal report, Centros de Integracion Juvenil, 1978.
- Villatoro J.; Medina-Mora, M.E.; Berenzon Sh.; Juarez, F.; Rojas, E.; and Carreno, S. "Drug Use Pathways Among High School Students of Mexico." Unpublished paper.
- Terroba, G., and Medina-Mora, M.E.
 Prevalencia del uso de farmacos en la
 Ciudad de Mexicali, B.C. Cuadernos
 Cientificos CEMESA (Scientific Booklets
 of the Mexican Center of Studies on
 Mental Health) 11:123-143. Mexico,
 1979.
- Wellish, D., and Hays, J.R. A cross cultural study of the prevalence and correlates of student drug use in the United States and Mexico. *Bulletin on Narcotics* 26:31-42, 1974.

MEXICO: NORTHERN BORDER STATES PREVALENCE OF DRUG USE AMONG HIGH SCHOOL STUDENTS BY DRUG AND USE PATTERNS

Drug	Ever use %	Use in last 12 months %	Use in last 30 days %	
Tobacco	(29.45)	(17.17)	(9.85)	
Baja California	*34.62	19.96	11.26	
Chihuahua	31.75	17.78	10.13	
Coahuila	27.54	16.77	9.73	
Nuevo Leon	*3.27	14.49	8.16	
Sonora	27.30	15.02	8.11	
Tamaulipas	24.04	13.46	1.05	
Alcohol	(49.69)	(29.06)	(14.76)	
Baja California	*61.24	*39.14	20.76	
Chihuahua	57.56	*36.15	*20.73	
Coahuila	*43.86	24.89	13.17	
Nuevo Leon	*39.40	24.02	11.35	
Sonora	51.36	30.12	14.38	
Tamaulipas	45.60	*24.35	12.32	
Marijuana	(1.54)	(0.67)	(0.39)	
Baja California	2.99	1.53	1.00	
Chihuahua	1.45	0.51	0.17	
Coahuila	1.48	0.63	0.37	
Nuevo Leon	0.84	0.38	0.19	
Sonora	1.78	0.81	0.40	
Tamaulipas	0.94	0.50	0.25	
Amphetamines	(2.31)	(1.38)	(0.75)	
Baja California	4.21	*2.60	1.53	
Chihuahua	2.14	1.28	0.60	
Coahuila Nuevo Leon	2.19	1.45	0.78	
Sonora	*1.03	0.75	0.33	
Tamaulipas	2.42	1.45	0.48	
	2.09	1.24	0.79	
Cocaine	(0.74)	(0.35)	(0.21)	
Baja California	1.91	1.00	0.38	
Chihuahua	0.85	0.38	0.04	
Coahuila Nuevo Leon	0.45	0.11	0.11	
Sonora	*1.05	0.00	0.00	
Tamaulipas	1.57	0.89	0.53	
	0.50	0.25	0.15	

NOTE: Values in parentheses correspond to the national average.

SOURCE: National High School Survey on Drug Use, 1991

^{*} p<0.05 (percentages that are not included in the confidence intervals of the national sample)

MEXICO: NORTHERN BORDER STATES
PREVALENCE OF DRUG USE AMONG HIGH SCHOOL STUDENTS
BY DRUG AND USE PATTERNS

Drug	Ever use %	Use in last 12 months %	Use in last 30 days %	
Hallucinogens	(0.50)	(0.26)	(0.15)	
Baja California	0.57	0.34	0.11	
Chihuahua	0.34	0.17	0.04	
Coahuila	0.52	0.22	0.22	
Nuevo Leon	0.19	0.09	0.05	
Sonora	*0.08	0.08	0.08	
Tamaulipas	0.25	0.10	0.05	
Inhalants	(3.50)	(1.59)	(0.88)	
Baja California	*5.06	2.30	1.34	
Chihuahua	2.69	1.11	0.64	
Coahuila	3.08	1.37	0.74	
Nuevo Leon	*1.26	0.56	0.33	
Sonora	2.58	1.13	0.65	
Tamaulipas	2.58	1.39	0.70	
Tranquilizers	(1.77)	(1.07)	(0.61)	
Baja California	*3.03	1.92	1.03	
Chihuahua	1.79	0.94	0.43	
Coahuila	1.41	0.78	0.56	
Nuevo Leon	*0.70	0.42	0.23	
Sonora	1.05	0.61	0.24	
Tamaulipas	1.54	0.99	0.55	
Sedatives	(0.68)	(0.46)	(0.28)	
Baja California	1.11	0.77	0.46	
Chihuahua	0.34	0.21	0.04	
Coahuila	0.52	0.33	0.26	
Nuevo Leon	0.33	0.28	0.09	
Sonora	0.53	0.40	0.28	
Tamaulipas	0.50	0.30	0.25	
Heroin	(0.21)	(0.12)	(0.08)	
Baja California	0.54	0.31	0.11	
Chihuahua	0.09	0.00	0.00	
Coahuila	0.22	0.11	0.07	
Nuevo Leon	0.00	0.00	0.00	
Sonora	0.32	0.08	0.00	
Tamaulipas	0.30	0.15	0.05	

NOTE: Values in parentheses correspond to the national average.

SOURCE: National High School Survey on Drug Use, 1991

^{*} p<0.05 (percentages that are not included in the confidence intervals of the national sample)

MEXICO: NORTHERN BORDER STATES DEMOGRAPHIC TRENDS AMONG HIGH SCHOOL STUDENTS USING DRUGS, BY DRUG

Drugs Ge Females (6,543) %	Gen	Gender		Age		Schooling of head of family (years)				
	Females	Males (6,837) %	≤15 (10,379) %	≥16 (2,913) %	0 (1,222) %	1-6 (4,785) %	7-9 (2,847) %	10-12	13+ (1,855) %	
Tobacco	16.94	39.14	22.46	48.71	25.52	26.20	26.29	32.19	34.41	
Alcohol	41.63	56.34	42.08	74.32	40.34	45.89	44.85	55.02	63.18	
Marijuana	0.35	2.44	0.69	3.88	2.07	1.16	1.35	1.61	1.20	
Cocaine	0.23	1.27	0.31	2.35	0.99	0.63	0.71	0.72	0.71	
Amphetamines	2.01	2.05	1.68	3.09	1.60	1.86	1.84	2.25	2.92	
Sedatives	0.51	0.39	0.30	0.87	0.58	0.23	0.29	0.79	0.76	
Hallucinogens	0.19	0.40	0.25	0.49	0.58	0.19	0.11	0.66	0.22	
Inhalants	1.78	3.39	2.41	3.20	4.00	2.35	2.31	2.29	2.89	
Tranquilizers	1.79	1.05	1.06	2.60	1.01	0.98	1.08	1.94	2.46	
Heroin	0.05	0.34	0.18	0.28	0.99	0.63	0.71	0.72	0.71	

NOTE: Percentage is drawn from the total sample within each group.

SOURCE: National High School Survey on Drug Use, 1991

EXHIBIT 3

MEXICO: NORTHERN BORDER STATES PERCEIVED RISK AND SOCIAL TOLERANCE OF REGULAR COCAINE USE AMONG HIGH SCHOOL STUDENTS

State	It is not d	angerous	Friends would strongly disapprove			
	Nonuser %	User %	Nonuser %	User %		
Baja California	2.77	*5.64	90.06	679.53		
Sonora	3.18	*4.35	88.84	82.07		
Chihuahua	2.95	1.79	88.86	85.71		
Coahuila	3.44	6.57	88.83	⁶ 78.28		
Nuevo Leon	2.48	3.85	86.47	679.49		
Tamaulipas	2.92	5.51	86.49	⁶ 74.80		
National average	3.80	*5.94	85.70	b77.83		

^aU-Man Whitney, p < 0.05, compared with students reporting not dangerous, somewhat dangerous, or very dangerous ^bU-Man Whitney, p < 0.05, compared with students reporting that friends would approve, neither approve nor disapprove, or would strongly disapprove

EXHIBIT 5

MEXICO: NORTHERN BORDER STATES PERCENTAGE OF HIGH SCHOOL STUDENTS REPORTING EASY AVAILABILITY OF COCAINE

State	Nonuser %	Experimenter %	Regular User %	Users of More than One Drug %	
Baja California	*2.51	10.44	11.36	*15.79	
Sonora	*1.48	*7.97	17.39	*12.50	
Chihuahua	*2.12	5.80	10.00	8.00	
Coahuila	*0.60	0.00	13.51	2.04	
Nuevo Leon	*1.07	6.35	13.33	15.79	
Tamaulipas	*0.80	4.00	11.11	*9.38	
National average	*1.06	*3.67	8.94	*8.49	

^{*}U. Man-Whitney p≥.05: 5-point scale ranging from impossible to very easy Nonusers versus any use; experimenters versus users on more than five occasions; users of more than one substance versus users of only one drug

SOURCE: National High School Survey on Drug Use, 1991

MEXICO: NORTHERN BORDER STATES
VARIABLES ASSOCIATED WITH DRUG INTAKE AMONG HIGH SCHOOL STUDENTS
LOGISTIC REGRESSION MODEL

Variables	Non User		Non User		User of one drug	
	R	Odds	R	Odds	R	Odds
Sex	0.0178	0.82	0.0000	1.08	0.0776	*1.79
Age	0.0101	1.20	0.0574	*1.65	0.0000	1.27
School status	0.0000	1.17	0.0000	0.86	0.0000	1.02
Work status	0.0146	1.23	0.0000	1.19	0.0000	1.29
School status of head of family	0.0216	1.08	0.0000	0.98	0.0000	1.02
Place of residence	0.0000	1.07	0.0000	1.02	0.0000	0.70
Perceived risk	0.0279	*1.35	0.0432	*1.75	0.0000	0.78
Social tolerance	0.1116	*2.09	0.0949	°2.04	0.0460	1.50
Drug use within the family	0.1097	°2.68	0.0727	⁶ 2.16	0.0000	1.39
Friends use drugs	0.1514	°2.68	0.1916	°4.06	0.1338	°2.39
Perceived availability	0.1113	°2.15	0.0803	°1.94	0.1277	°2.5
Depression	0.0661	°1.64	0.0976	°2.26	0.0000	0.8
Suicidal ideation	0.0670	°1.23	0.0671	₺1.27	0.0623	*1.2

 $^{a}p \ge 0.05$ $^{b}p \ge 0.01$ $^{c}p \ge 0.001$

SOURCE: National High School Survey on Drug Use, 1991