Unmet needs for treatment of alcohol and drug use in four cities in Mexico

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Artículo original

SUMMARY

Introduction

Even though heavy alcohol consumption is frequent, alcohol-related consequences are common, and drug use has become more common in this country, we know very little about public health response and the types of treatments available for persons with substance use disorders in Mexico. Current national estimates show that about one in every five persons with alcohol and substance use disorders received treatment in the last 12 months, but to date the rates of treatment for local communities are unknown; these data are needed for policy planning at community level. This study presents data on the treatment for substance use and substance use disorders in three urban areas of Northern Mexico and one state capital in Central Mexico. The Northern region is of particular interest in Mexico because of its proximity to the United States and previous evidence that alcohol and drug use is about twice as common in this region compared with other regions. The city of Queretaro provides a more appropriate comparison for the cities in Northern Mexico than a place as Mexico City, or the national means, due to its level of development, population size, and basic epidemiologic data on drug use.

Material and methods

The Local Surveys on Addictions 2005 (Encuestas Locales de Adicciones 2005) are part of the Mexican National Survey on Addictions (ENA) series, supported by the Ministry of Health (CONADIC- National Council Against the Addictions), state and local governments, and the National Institute of Psychiatry (INP), and included the cities of Tijuana (Baja California), Ciudad Juarez (Chihuahua), Monterrey (Nuevo Leon) and Queretaro (Queretaro), as part of a continuous effort to monitor use of illicit substances in Mexico. The 12-month prevalence of health and non-health care service use for treatment of substance use was estimated. Correlates of service use, including interference with role impairment, were identified in logistic regression analyses that took into account the complex sample design and weighing process.

Results

A total of 2,148 completed interviews were obtained for a response rate of 70.5%. About 2.2% of those who used any substance saw any provider in the last 12 months, with the largest prevalence among the health care sector (1.37%), followed closely by the non-health care sector (0.91%). Among the health care sectors, the general medical sector provided more services than mental health specialists. About 11% of those with any disorder consulted for services, with the health care sector providing many more services than the non-health care sector. The prevalence of use for mental health specialists and the general medical sector is very similar for those with a disorder. The largest prevalence of any service was found in Monterrey (about 15%), while Ciudad Juarez had the lowest (6.6%). Less than 50% of those with an active disorder reported any role impairment, but respondents with high levels of role impairment were more likely to use services.

Conclusion

We found large unmet needs for substance use services among urban residents of Queretaro and in three major northern cities in Mexico. The two cities that have shown higher rates of substance use in addiction surveys in Mexico (Tijuana and Ciudad Juarez) had the lowest levels of any treatment. We found few predictors of service use among those who used any substance and among those with an active disorder. Among those, respondents with high levels of role impairment were more likely to use services. Treatment for substance use can be effective and is urgently needed if Mexico wants to face the prominent place of alcohol in the burden of disease in the country. The effort to change the current situation of alcohol and drug service utilization, including the low rates of mental health specialists in these cities, is likely to require coordination of research, larger numbers of services, treatment alternatives, and service development.

Key words: Alcohol, drug use, health services, border.

RESUMEN

Introducción

Aunque el consumo excesivo de alcohol sea frecuente, las consecuencias de este consumo sean comunes y haya aumentado la disponibilidad de drogas, se sabe poco de las acciones de salud pública y los tipos de tratamiento disponibles para personas con trastornos por el uso de sustancias en México. Estimaciones actuales nacionales muestran que alrededor de una de cada cinco personas con trastornos por el uso de alcohol y drogas recibió tratamiento en

los últimos 12 meses. Pese a ello, hasta la fecha no disponemos de estimaciones de las tasas de tratamiento a nivel local, lo que es necesario para la planeación de políticas públicas a nivel comunitario. Este trabajo presenta datos sobre el tratamiento para el uso de sustancias y para los trastornos por el uso de sustancias en tres áreas urbanas del norte de México y una ciudad capital localizada en el centro del país. La región norte es de particular interés por su proximidad con los Estados Unidos y por la evidencia previa de que el alcohol y las drogas es dos veces más común en esta región comparada con otras de la República. Por su nivel de desarrollo, su tamaño poblacional y los datos epidemiológicos básicos que aporta sobre el uso de drogas, la ciudad de Querétaro provee un punto de comparación para las ciudades del norte más apropiado que un lugar como la Ciudad de México o el promedio nacional.

Material y métodos

Las Encuestas Locales de Adicciones 2005 son parte de la serie de Encuestas Nacionales de Adicciones (ENA), apoyadas por la Secretaría de Salud, el Consejo Nacional Contra las Adicciones (CONADIC), los gobiernos locales y estatales, y el Instituto Nacional de Psiquiatría, e incluyen las ciudades de Tijuana (Baja California), Ciudad Juárez (Chihuahua), Monterrey (Nuevo León) y Querétaro (Querétaro) como parte de un esfuerzo continuo por monitorear el uso de sustancias ilícitas en México. Se estimó la prevalencia en los últimos 12 meses de servicios médicos y no médicos para el tratamiento del uso de sustancias. Los correlatos del uso de servicios, incluida la discapacidad asociada con la interferencia en los roles, se identificaron por medio de regresiones logísticas, mismas que tomaron en consideración el diseño de la muestra y los ponderadores de la encuesta.

Resultados

Un total de 2148 residentes tuvieron entrevistas completas, para una tasa de respuesta de 70.5%. Solamente 2% de las personas que usaron alcohol o drogas en los últimos 12 meses hicieron uso de algún servicio de tratamiento. La prevalencia más elevada se dio en los servicios de salud (1.37%), seguida de cerca por el sector no médico (0.91%). Entre el sector salud fueron más frecuentes los servicios ofrecidos por el médico general que por los especialistas en salud mental. Alrededor de 11% de aquéllos con algún trastorno por sustancias consultó con los servicios; el sector médico ofreció mucho más servicios que el sector no médico. La prevalencia de uso de servicios de salud mental especializados y la del médico general fueron muy similares para aquellos con un trastorno por sustancias. La prevalencia más elevada de cualquier uso de servicios se dio en la ciudad de Monterrey (alrededor de 15%), mientras que Ciudad Juaréz tuvo la prevalencia más baja (6.6%). Menos de 50% de aquéllos con un trastorno activo mostró algún nivel de discapacidad en el desempeño de roles, pero las personas con mayores niveles de discapacidad tuvieron mayores probabilidades de usar servicios.

Conclusiones

Encontramos una gran cantidad de necesidades no satisfechas para el tratamiento del uso de sustancias entre residentes de áreas urbanas de cuatro grandes ciudades de México. Las dos ciudades que mostraron las tasas más elevadas de uso de sustancias en otras encuestas de adicciones en México (Tijuana y Ciudad Juárez) mostraron los niveles más bajos de cualquier tratamiento. Encontramos pocos correlatos para el uso de servicios entre aquellos que usaron cualquier sustancia y entre aquellos con un trastorno activo. Entre éstos, los entrevistados con mayores niveles de discapacidad tuvieron mayores probabilidades de usar cualquier servicio. El tratamiento para el uso de sustancias puede ser efectivo y es urgentemente necesario si México quiere enfrentar el lugar prominente que tiene el consumo de alcohol en la carga de la enfermedad en el país. El esfuerzo necesario para cambiar la presente situación del bajo uso de servicios para el tratamiento del consumo de alcohol y drogas, incluidas las bajas tasas de uso de servicios especializados en salud mental, probablemente requiera la coordinación de investigación, mayor número y disponibilidad de servicios, más alternativas de tratamiento y desarrollo de servicios. Son urgentemente necesarias mejorías en la disponibilidad y en los tipos de tratamientos disponibles para los trastornos por uso de sustancias.

Palabras clave: Alcohol, uso de droga, servicio de salud, frontera.

INTRODUCTION

Alcohol and drug abuse and dependence are lower in Mexico than in other developing countries,[1-3] but the detrimental consumption pattern in Mexico, which involves periodic consumption of large amounts of alcohol and few social restrictions for heavy drinking,[4] makes developing policies for alcohol use an important public health goal. Alcohol consumption is responsible for a large share of the burden of disease in contemporary Mexico, with liver cirrhosis being the third leading cause of death among males and the seventh among females.[5] Alcohol is the leading risk factor for mortality among the Mexican population, being responsible for 7.5% of the total disability-adjusted life years.[5] Meanwhile, drug use and drug use disorders in Mexico have been escalating, especially among youth and women.[6,7]

Even though heavy alcohol consumption is frequent, alcohol-related consequences are common, and drug use has become more common in the country, we know very little about the public health response and the types of treatment available for persons with substance use disorders in Mexico.[8] Current national estimates show that about one in every five persons with alcohol and substance use disorders received treatment in the last 12 months,[9] but to date the rates of treatment for local communities are unknown; this data is needed for policy planning at community level. Also, estimates of specialized service use among the total group of the population that uses alcohol and drug, the disability associated with this use and better knowledge of factors associated with health care are needed at local levels.

This study presents data on the treatment for substance use and substance use disorders in three urban areas of Northern Mexico and one state capital in Central Mexico. The Northern region is of particular interest in Mexico because of its proximity to the US and previous evidence that alcohol and drug use is about twice as common in this region compared with other regions. The city of Queretaro provides a more appropriate comparison for the cities in Northern Mexico than a place as Mexico City, or the

national means, due to its level of development, population size, and basic epidemiologic data on drug use.

METHODS

Sample

The Local Surveys on Addictions 2005 (Encuestas Locales de Adicciones 2005)[10] are part of the Mexican National Survey on Addictions (ENA) series, supported by the Ministry of Health (CONADIC- National Council Against the Addictions), state and local governments, and the National Institute of Psychiatry (INP), and included the cities of Tijuana (Baja California), Ciudad Juarez (Chihuahua), Monterrey (Nuevo Leon) and Queretaro (Queretaro), as part of a continuous effort to monitor the use of illicit substances in Mexico. Standard sampling methodology was used, in which 50 primary sampling units (PSUs) were selected with probability proportional to a measure of the population size in each location, based on data from the National Institute of Geography and Statistics 2000 census count (which is similar to US census tracts). Two city blocks were selected in each PSU as second stage units and each housing unit was listed within each block; a selected segment of these housing units was drawn as the third stage sampling unit. Finally, all eligible respondents aged 12-65 within the selected housing unit were listed in order of age, and respondents were selected according to the «last birthday» technique, in which the respondent who had the birthday closest to the interview day was chosen. Four days of interviewer training were provided by INP staff, which also followed supplementary field supervision and data control protocols. Data were collected in November 2005 on a total of 2,148 respondents, representing a 70.5% response rate. Among the main reasons for non-response at an individual level, 5.9% were due to non-cooperation («refusal») and 4.2% due to «no one at home» for being interviewed.

Measures

The survey questionnaire, lasting an average of 49 minutes, included items related to alcohol use/dependence and related problems, drug use/dependence, and demographic characteristics (e.g., age, sex, education, marital status, employment status in the 30 days prior to the survey, and city of residence).

Alcohol and drug use and disorders: Lifetime and last 12-month alcohol and illicit drug use (marijuana, crack-cocaine, other drug) were assessed with a series of questions validated in local and national surveys in Mexico dating since the 1970's.[11] Alcohol and drug dependence were assessed with a scale that included items adapted from the Alcohol Section of the Composite International Diagnostic

Interviews (CIDI) core,[12] which operationalizes the Diagnostic and Statistical Manual of Mental Disorders[13] criteria for alcohol dependence (last 12 months) and drug dependence (lifetime and last 12 months).[14,15] Following the DSM-IV criteria for establishing alcohol and drug use dependence, at least three of the seven domains that constitute the dependence criteria are needed.

Service utilization: Information about the receipt of 12-month treatment for alcohol or drug problems, the type and context of professionals visited, as well as the use of self-help or support groups and hotlines, was obtained for respondents who used any alcohol or drugs during the last 12 months. Respondents could select as many professionals and treatment options as they used in the previous 12 months. Information was not available to differentiate between service use by alcohol users and drug users. As comorbid alcohol and drug use disorders are common in this population, with more than 50% of those with a 12-month drug use disorder also showing an alcohol use disorder, providers are used to treat alcohol and drug users in the same context, without necessarily differentiating between them.

Health and non-health care in the 12 months before the survey was divided into the following four sectors: 1. any mental health specialists, consisting of psychiatrists, psychologists, counselors, psychotherapists, mental health nurses, and social workers in a mental health specialty setting; 2. general medical practitioners, consisting of family physicians, general practitioners, other medical doctors (e.g., cardiologists and gynecologists), nurses, occupational therapists, and other health care professionals; 3. human services, including outpatient treatment in any setting other than a specialty mental health setting, or treatment from a religious or spiritual advisor, such as a minister, priest, or rabbi; 4. complementary-alternative medicinal Internet use, including self-help groups, other healers (e.g., herbalists, chiropractors, and spiritualists), and other alternative therapy.

Impairment: Respondents who used any alcohol or drugs during the last 12 months were administered the Sheehan Disability Scale (SDS)[16] to assess the extent to which substance use interfered with functioning in work, household, relationship, and social roles in the worst month of the past year. Details of the use of this scale in epidemiological studies in Mexico were detailed elsewhere.[17] The Sheehan scale is a graphic scale with verbal and numerical anchors. For example, when the subject used any alcohol or drugs during the last 12 months, he/she had to answer the question: «Using a 0 to 10 scale, where 0 means no interference and 10 means very severe interference, what number describes how much your alcohol and drug use interfered with each of the following activities during the past 12 months?». The specific areas mentioned were: home (household management like cleaning, shopping, and taking care of the house/apartment), ability to work, close relationships (ability to establish and maintain close relationships with other people) and social

life. The scale of responses is a horizontal line with numerals from 0 to 10 and five verbal descriptions. The description «Not at all» corresponds to a value of 0; «Mild» ranges from 1 to 3; «Moderate» ranges from 4 to 6; «Severe» ranges from 7 to 9; and «Very severe» is 10. A global or summary score was created by assigning the highest severity category across all four role domains. The SDS showed good internal consistency reliability across domains in replication analyses performed in the World Mental Health Surveys (including Mexico) data, that found Cronbach's alpha (a measure of internal consistency reliability) in the range 0.82–0.92 across countries.[2]

Analyses

The data were weighed to adjust for differential probabilities of selection and non-response; post-stratification weights were also applied so that the data represented the four cities according to the 2000 census. The 12-month prevalence of service use among those that used any substances and among those that had any substance use disorders in the prior 12 months was calculated. Proportions were compared with design-adjusted chi-square tests using SUDAAN software.[18] Crude and adjusted odds ratios (ORs) were estimated in logistic regression models[19] also using SUDAAN software to adjust for design effects. Significance tests were evaluated using two-sided design-based tests at the 0.05 level of significance.

RESULTS

An unweighted total of 1068 respondents used any alcohol or drug in the last 12 months, and 151 had any alcohol or drug use disorders. They are the basis of this report.

Table 1 presents the prevalence of service use among those who used any substance in the last 12 months (top) and among those who had any substance use disorder in the last 12 months (bottom). About 2.2% of those who used any substance saw any provider in the last 12 months, with the largest prevalence among the health care sector (1.37%), followed closely by the non-health care sector (0.91%). Among the health care sectors, the general medical sector provided more services than the mental health specialists. About 11% of those with any disorder consulted for services, with the health care sector providing much more services than the non-health care sector. The prevalence of use for mental health specialists and the general medical sector is very similar for those with a disorder. The largest prevalence of any service was found in Monterrey (about 15%), while Ciudad Juarez had the lowest (6.6%).

Table 2 presents the levels of role impairment among substance users and among those with a substance use disorder. While less than 20% of users reported any impairment (the summary column), about 50% of those with a disorder reported any impairment. This difference is more evident on severe levels of impairment where only 2.6% of those with substance use reported this level of impairment, while 14.4% of those with a substance use disorder reported it. Impairment in the «social» and «people» areas were the sectors most affected by role impairment.

Correlates of service use are presented on table 3. Among the total sample of substance users, those with «High school and more» education were less likely to use services compared to those with low levels of education. There was a strong relationship between higher levels of role impairment and service use, with those with severe levels being about 21 times more likely to use services than those without impairment. Elevated ORs were observed in several categories among those with any disorder but most lacked statistical significance, in great part due to the small sample size of persons with any substance dependence. There was a marginal (p=.07) association between levels of impairment and use of any service among those with any disorder, with those in the highest category about nine times more likely to use service.

Table 1. Service use among drug and/or alcohol users. Mexico, 2006

City	Any mental health		Any general medical		Any health care		Any human service		Any CAM		Any non-health		Any treatment	
	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)
12 month use (n=1068)														
Querétaro	0.94	(0.76)	2.20	(1.48)	2.20	(1.48)	0.00	(0.00)	0.67	(0.50)	0.67	(0.50)	2.87	(1.48)
Tijuana	0.47	(0.36)	0.41	(0.39)	0.88	(0.39)	0.57	(0.58)	0.33	(0.33)	0.90	(0.25)	1.78	(0.44)
Ciudad Juárez	0.26	(0.27)	0.00	(0.00)	0.26	(0.27)	0.66	(0.52)	0.51	(0.52)	1.18	(0.89)	1.44	(0.95)
Monterrey	0.85	(0.47)	1.13	(0.66)	1.98	(0.97)	0.51	(0.35)	0.36	(0.34)	0.87	(0.45)	2.64	(1.27)
Total	0.64	(0.25)	0.95	(0.41)	1.37	(0.48)	0.44	(0.21)	0.46	(0.21)	0.91	(0.29)	2.21	(0.59)
12 months alcohol or drug dependence (n=151)														
Querétaro	5.50	(5.24)	8.11	(5.85)	8.11	(5.85)	0.00	(0.00)	3.91	(3.52)	3.91	(3.52)	12.01	(6.28)
Tijuana	2.38	(1.95)	2.09	(2.26)	4.46	(2.70)	2.90	(2.92)	1.68	(1.69)	4.58	(1.35)	9.04	(3.47)
Ciudad Juárez	2.21	(2.01)	0.00	(0.00)	2.21	(2.01)	0.00	(0.00)	4.41	(4.22)	4.41	(4.22)	6.62	(4.39)
Monterrey	6.29	(3.43)	6.73	(4.55)	13.02	(6.78)	3.77	(2.87)	0.00	(0.00)	3.77	(2.87)	15.28	(7.23)
Total	4.14	(1.67)	4.27	(2.02)	7.25	(2.64)	1.93	(1.17)	2.23	(1.29)	4.17	(1.48)	10.98	(2.91)

Table 2. Distribution of disability scales among 12-month alcohol and drug users by substance involvement. Mexico, 2006 (n=1086)

	Home		Work		Close relations		Social		Any (summary)*	
	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
12-month use										
none	87.1	1.1	87.8	1.2	89.5	1.0	88.6	1.0	81.5	1.3
low (1-3)	8.5	1.0	7.1	1.1	6.1	1.0	7.5	1.2	10.6	1.4
medium (4-6)	3.5	0.8	4.0	0.6	3.1	0.6	2.4	0.5	5.4	0.9
severe (7-10)	0.9	0.3	1.0	0.3	1.3	0.4	1.5	0.5	2.6	0.5
12-month dependence										
none	65.0	3.9	62.8	4.0	65.9	4.1	65.1	4.1	52.3	4.6
low (1-3)	17.4	3.0	16.8	3.0	13.1	3.5	15.7	3.4	19.2	5.2
medium (4-6)	13.4	3.2	15.1	3.1	13.4	2.7	11.2	1.7	14.2	3.3
severe (7-10)	4.3	1.6	5.4	2.1	7.6	2.7	8.0	3.5	14.4	3.2

*Highest severity category across all 4 role domains.

DISCUSSION

This study is the first to provide detailed information on the use of services for alcohol and drug use in Northern urban areas of Mexico. These areas, which are close to the US border, are known to have the highest levels of alcohol and drug use in Mexico. For instance, in the 1998 Mexican National Survey on Addictions (Encuesta Nacional de Adicciones: ENA), 11% of the population of areas along the US border reported heavy drinking (five or more drinks at least once in the past month), twice as many as in other areas of Mexico.[20] Tijuana and Ciudad Juarez had the

Table 3. 12-Month service usage in four cities in Mexico: Sociodemographic and Disability Predictors of Any Treatment (adjusted by city)

	Any Treatment Given			
	Any 12-Month use		Any 12-Month dependence	
Variable/Level	OR	95% CI	OR	95% CI
Age				
12-25	1.39	(0.6-3.5)	1.51	(0.3-8.6)
26-34	1.21	(0.4-3.8)	1.03	(0.2-5.1)
35+	1.0 (1.0, 1.0)		1.0 (1.0, 1.0)	
Overall Test of Effect	Wald-Chi 2 df = 0.6, P-Value = .76		Wald-Chi 2 df = 0.4, P-Value = .84	
Education				
1. Elementary or less	1.0 (1.0, 1.0)		1.0 (1.0, 1.0)	
2. Middle	1.46	(0.4-5.2)	6.53	(0.9-48.9)
3. High school-college+	0.07	(0.0-0.7)	0.37	(0.0-8.7)
Overall Test of Effect	Wald-Chi 3 df = 8.2, P-Value = .02		Wald-Chi 2 df = 8.4, P-Value = .01	
Work last 30 days				
Yes	1.0 (1.0, 1.0)		1.0 (1.0, 1.0)	
No	0.66	(0.3-1.5)	1.44	(0.4-4.8)
Overall Test of Effect	Wald-Chi 1 df = 1.1, P-Value = .29		Wald-Chi 1 df = 0.4, P-Value = .53	
Marital status				
Never married	1.0 (1.0, 1.0)		1.0 (1.0, 1.0)	
Married/cohabitating	1.12	(0.5-2.6)	1.6	(0.6-4.1)
Separated/widowed/divorced	2.24	(0.6-8.9)	4.22	(0.8-22.1)
Overall Test of Effect	Wald-Chi 2 df = 1.5, P-Value = .48		Wald-Chi 2 df = 3.6, P-Value = .17	
Sex				
Male	1.27	(0.4-4.1)	1.18	(0.3-5.5)
Female	1.0 (1.0, 1.0)		1.0 (1.0, 1.0)	
Overall Test of Effect	Wald-Chi 1 df = 0.2, P-Value = .68		Wald-Chi 1 df = 0.1, P-Value = .82	
Overall role performance				
None	1.0 (1.0, 1.0)		1.0 (1.0, 1.0)	
low (1-3)	4.1	(0.6-26.2)	2.45	(0.1-50.9)
medium (4-6)	7.37	(2.9-18.6)	5.01	(0.5-47.8)
severe (7-10)	21.29	(6.8-66.7)	8.68	(1.2-63.3)
Overall Test of Effect	Wald-Chi 3 df = 54.4, P-Value =< .01		Wald-Chi 2 df = 7.1, P-Value = .07	

highest lifetime prevalence of illegal drug use in Mexico, over twice the national average.[7] Other studies have also found that the border areas have the highest rates and the fastest rates of increase in drug use in Mexico.[6-21-23] We found large unmet needs for substance use services among urban residents of Queretaro and in three major Northern cities in Mexico, with less than 2% of those that used any substance receiving care and only 11% of those with an active substance use disorder being treated. The two cities that have showed higher rates of substance use in addiction surveys in Mexico (Tijuana and Ciudad Juarez) had the lowest levels of any treatment.

Prior addiction surveys in Mexico have shown prevalence of service use of only 5% in 1988 and only 6% in 1998.[8] The level of any treatment found in this study among those with a disorder (11%) was as even lower than the prevalence reported recently on a national sample of adults (about 20%),[9] and lower than the 22% prevalence of any service use among a sample of adolescents from Mexico City,[24] suggesting that unmet needs in this area of larger alcohol and drug consumption is rampant. Estimates of service use in the Texas border area of the US and Mexico have also shown low rates of service use in this area, since among those in need for treatment on substance use, only 3.1% of urban residents and only 7.8% of rural residents ever used services.[25]

About 50% of those with a substance use disorder reported some level of role impairment. It is interesting that this percentage of impairment is much lower than the one reported among cases of depression in a US National sample (97%).[26] Whether this is due to depression being more disabling than substance use disorders or to lower levels of disability in Mexico associated with a large level of social tolerance for substance use in Mexico is a matter of further studies. Nevertheless, a study in Mexico found that «close relationships» and «social life» were the areas most deeply affected by mental disorders[11] other than substance use disorders, and our study also found that these same areas were mostly rated with severe levels of impairment among our patients.

We found few predictors of service use among respondents who used any substance and among those with an active disorder. Among those, respondents with high levels role impairment were more likely to use services. This result is consistent with other research in the Texas-Mexico border area[25] or among Latinos in the US,[27] showing that severity of substance use disorder is related to treatment seeking. It is also consistent with results in Mexico that found a dose-response relationship between severity of mental disorder and use of services.[28] In these data, those with high school or more were less likely to use services in multivariated models that adjusted by education and current employment. The reason for this is not clear but prior research also found higher education to be associated with more use of services in a sample of El Paso residents, Texas,

but not among residents from Urban Valley or Colonias in Texas.[29] National data from Latinos in the US also found that those with high school used less services.[27] Since in Mexico most specialized treatments in the health care sector, not including non-governmental agencies (NGOs), for alcohol and specially so for drug use are available publicly through the hospitals of the Health Ministry and public insurance and the Centros de Integracion Juvenil, it is possible that respondents with low levels of education find more pressures and less barriers in using these services. Differences in profiles of drug use among patients seen in public health care and NGOs facilities, limitations in health care options, and the general lack of services in some of the cities described here have been also noted elsewhere[8] and confirm the great need in this region.

Whether the lack of service use among those with a current disorder is due to the perception of unavailability of services in the area or to subjective or social barriers related to stigma to search and to accept professional help among substance users is a matter of further research that will be addressed in a future paper.

Limitations

This study has important limitations that should be considered when interpreting reported findings. First, this study is not representative of other urban areas of Mexico and its results may not be representative of rural areas in these states or elsewhere in Mexico. We did not interview institutionalized or homeless respondents that may have larger unmet needs for service use. The cross-sectional nature of our study also limits our ability to discuss causal factors related to service use in this sample.

CONCLUSION

With the above limitations taken into account, this study supports previous findings demonstrating that treatment for substance use in Mexico is rare and there is a large unmet need for this population, particularly in northern regions of the country. Treatment for substance use can be effective[30] and is urgently needed if Mexico wants to face the prominent place of alcohol in the burden of disease in the country. The effort to change the current situation of alcohol and drug service utilization, including the low rates of mental health specialists in these cities is likely to require coordination of research, larger numbers of services, treatment alternatives, and service development.

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