Differences in illegal drug consumption between native and immigrants in a large sample of injected drug users in Catalonia (Spain)

Diferencias en el consumo de drogas ilegales entre nativos e inmigrantes en una amplia muestra de consumidores de droga por vía parenteral en Cataluña (España)

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Resumen

El objetivo del estudio era describir los patrones de abuso de drogas ilegales en relación con el proceso migratorio y el uso de centros de tratamiento entre los usuarios de drogas por vía inyectada (IDUs) de los programas de reducción de daños, y comparar las características de los IDUs nativos e inmigrantes. Estudio de diseño transversal de 748 IDUs de más de 18 años que fueron atendidos en los centros de reducción de daños entre 2008 y 2009. Se exploraron las diferencias en las condiciones socioeconómicas, de consumo de drogas ilegales, de estado de salud y de uso de los centros de tratamiento de drogas entre los IDUs nativos y los inmigrantes. Además, también se ha descrito si los IDUs inmigrantes empezaron a inyectarse drogas ilegales antes o después de entrar en el país de acogida. Los IDUs inmigrantes tienden a vivir solos más frecuentemente, a empezar la inyección a edad más avanzada, a usar heroína inyectada más frecuentemente y a usar menos los centros de tratamiento de drogas que los nativos. Un 66% de los inmigrantes empezaron a usar drogas ilegales antes de llegar al país de acogida. Los que empezaron en otros países llevaban 5 o menos años residiendo en el país de acogida (63,9%). En general, los IDUs inmigrantes (36,9%) frecuentaban menos los centros de tratamiento de drogas que los nativos (71,8%). En conclusión, la migración podría ser un factor de riesgo para la iniciación en el abuso de las drogas ilegales o el aumento de su consumo, a menudo adoptando los patrones de consumo local y agravándose debido al menor acceso a los centros de tratamiento de drogas.

Palabras clave: programas de reducción de daños, inyectores de drogas, inmigrante, heroína.

Abstract

The aims of this study were to describe illegal drug abuse patterns in relation to the migration process and use of drug treatment centers among immigrant injected drug users (IDUs) involved in harm reduction programs, and to compare the characteristics of immigrant and native IDUs. Cross-sectional study of 748 IDUs aged ≥18 years attending harm reduction centers between 2008 and 2009. We explored differences in socio-economic status, illegal drug consumption, health status and use of treatment centers in native versus immigrant IDUs. We also described whether immigrant IDUs started using injected drugs before or after entering the host country. Immigrant IDUs tend to live alone more frequently, start injection at later ages, use heroin and inject it more frequently and use drug treatment centers less frequently than native IDUs. Seventy-six percent of immigrants began using illegal drugs before arriving at the host country. Those who started in other countries were residing in the host country for 5 years or less (63.9%). Overall, immigrant IDUs attended drug treatment centers (36.9%) less frequently than native IDUs (71.8%). In conclusion, migration could be a risk factor for illegal drug abuse initiation or increase in consumption, often with the adoption of local consumption patterns and aggravated due to a lower access to drug treatment centers.

Key words: harm reduction programs, injected drug user, immigrant, heroin.

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Injection of illegal drugs is an important public health problem in many countries, mainly because of the risk of blood-borne infections and fatal overdoses. Effective social and health services as well as the development of comprehensive prevention and treatment programs for substance abuse and dependence are essential for assessing the extent of the problem of drug consumption and its consequences (Wagner et al., 2010). Most EU countries have implemented harm reduction programs, including interventions, programs and policies that seek to reduce the harmful effects of drug use on the health and social and economic well-being of individuals, communities and societies (e.g. syringe exchange and methadone programs, health education, drug consumption rooms, social and labor market inclusion, and community mediation programs) (Cheung, 2000; Lenton & Single, 1998).

These programs have been extensively evaluated and their effectiveness in reducing morbidity and mortality associated with drug consumption has been verified (Hedrich, Kerr, & Dubois-Arber, 2010; Wodak & Cooney, 2005; Wodak, 2009). Immigrant injected drug users (IDUs) who use the programs have been found to have higher rates of unemployment and homelessness than natives (Folch et al., 2011). Moreover, although some governments provide universal health coverage, immigrants and other socially disadvantaged groups encounter barriers to accessing health care services (Antón & Muñoz de Bustillo, 2010; Lindert, Schouler-Ocak, Heinz, & Priebe, 2008). Immigrants generally have poorer knowledge of the local health system, reduced economic resources, difficulties with communication, cultural barriers or even fear of being deported (Lindert et al., 2008; Regidor et al., 2009). This could specially happen in the case of immigrant drug users since they could have a different interpretation of specific terms included in the preventive messages (Penka, Heimann, Heinz, & Schouler-Ocak, 2008). For this reason, harm reduction programs are important for immigrant drug users, as they may provide an initial point of access to treatment and health care centers (therapeutic processes) and to help to diminish their risks of adverse migratory processes (social exclusion). However, although ease of access to harm reduction centers differs between immigrant groups (as a function of language and cultural differences) the same policies are usually applied to all immigrant groups.

The number of immigrant IDUs has increased considerably in Catalonia in recent years. Although some of them become drug users before leaving the country of origin, others started using drugs during the migratory process or after their arrival in the host country (Freixa & Meroño, 2011; Tordable Merino, Sánchez Sánchez, Santos Sanz, Garcia Vicario, & Redondo Martín, 2010). Immigrants who start using drugs in their country of origin tend to adapt their patterns of use after arrival in the host country (Fernandez-Pol, Bluestone, Morales, & Mizruchi, 1985). Drug consumption may be further aggravated by the migratory process itself (Casas, Collazos, & Qureshi, 2011; Vega, Kolody, & Valle, 1987), due to the disruption of resettlement and being separated from family and traditional values (Carballo & Nerurkar, 2001). A conceptual model suggests how the social environment (early socialization and social disorganization) and stress from frustrated opportunities can affect individuals; this leads to greater risk of engaging in drug consumption (Buchanan & Smokowski, 2009; Elliot-Delbert, Huizinga, & Ageton, 1985) and higher level of associated risk behaviors (e.g. acculturation stress has been associated with mental health distress) (Haasen, Demiralay, & Reimer, 2008).

In this sense, understanding the relationship between the migratory process and drug consumption is important for the development and implementation of new strategies to prevent drug consumption and its consequences in this population. Moreover, policy makers need to identify the real and perceived barriers to implementing comprehensive societal initiatives that are necessary for eliminating social differences in health. Thus, the aims of the present study were to describe patterns of drug abuse, characteristics of the migratory process and the access and use of drug treatment centers in immigrant IDUs that use harm reduction programs in Catalonia, and to compare these to the characteristics of native IDUs.

Methods

A cross-sectional study was performed using face-to-face interviews carried out in the network of Harm Reduction Centers in Catalonia (Spain) between October 2008 and March 2009 (18 Harm Reduction Centers). All 18 Harm reduction centers included in the study offered needle exchange programs, outreach programs, and three supervised injecting facilities. After collecting data on the number and characteristics of illegal drug users that contacted these centers in the previous year, a convenience stratified sample by all the 18 Harm Reduction Centers and country of origin was selected (n=748). Assignment to strata was proportional to the volume of visits in each center and to the percentage of individuals in each center by country of birth. In centers with less than 5% foreign-born clients, only native participants were recruited. Participants were randomly selected within harm reduction centers. Most harm reduction centers (11 out of 18) were located in Barcelona or in its metropolitan area. The study population consisted of men and women IDUs aged ≥18 years who attended these centers, had used injected illegal drugs in the six months prior to the interview, and had given informed consent to being included in the study. In 2008 there were 7,221 drug injectors who attended 18 harm reduction centers. Of those, 3,375 were immigrants.

Interviews were conducted by trained interviewers using an anonymous structured questionnaire adapted from the "Drug Injecting and Risk of HIV Infection Questionnaire" designed by WHO, (WHO, 1994) which was translated into

various languages (Spanish, Romanian, Russian, English and French). The study protocol was approved by the local ethics committee (Hospital Universitari Germans Trias i Pujol).

The dependent variables that were taken into account were socio-demographic characteristics (sex, age, educational level, living conditions and occupation), drug use (age at first injection, first injected drug, main injected drug and frequency of use, injection with used syringe), perceived health status, use of drug treatment centers and a variable related to the migratory process (number of years living in Spain). The subcategories of these variables are listed in table 1.

We use two independent variables; the main independent variable was country of origin with individuals classified as being immigrants or natives. In response to the question, "What is your country of origin?", individuals who did not indicate that they were from Spain were classified as immigrants. Immigrants were further sub-classified as Eastern Europeans (from Albania, Armenia, Belorussia, Bosnia and Herzegovina, Bulgaria, Croatia, Slovenia, Georgia, Lithuania, Macedonia, Montenegro, Poland, Czech Republic, Rumania, Russia, Serbia and Ukraine) and those of other origins (Germany, Algeria, Argentina, Brazil, Cyprus, USA, France, Greece, Equatorial Guinea, Haiti, Iraq, Iran, Italy, Lebanon, Libya, Morocco, Mauritania, Norway, Pakistan, Peru, Portugal, United Kingdom, Senegal, Sweden, Switzerland, Tunisia and Venezuela). The second independent variable was the country where the participant began his/her drug consumption and the country in which the participant began his/her injected drug use. The percentage of missing values was less than 1,2% in all variables.

Data Analysis

We compared the socio-demographic profile, drug consumption characteristics, health status and use of drug treatment centers of immigrants and natives, and of Eastern European and non-Eastern European immigrants. Among immigrants, we compared the socio-demographic and drug consumption characteristics of individuals who began using injected drugs in the host country (different from their country of origin) to those of individuals who began use in their country of origin; we also performed this comparison separately for Eastern European and non-Eastern European immigrants. The variables and proportions were compared using the Pearson χ^2 test. Statistical significance was set at $P<0.05$. All analyses were carried out using STATA v11.0.

Results

Differences between native and immigrant IDUs

We observed significant differences in socio-demographic variables, illegal drug consumption characteristics, health status and use of drug treatment centers between native and immigrant IDUs (Table 1). Compared to natives, immigrant IDUs tended to be younger, to live alone, to have higher educational level and higher frequency of drug injection with less syringe sharing. They also started injected drug use at older ages, mainly heroin consumption, they had poorer perceived health status and they went less to drug treatment centers. The percentage of men among immigrant IDUs was higher than among natives.

Table 1
Characteristics (n, %) of native and immigrant injected drug users attending Harm Reduction Centers in Catalonia (2008-2009)

	Natives		Immigrants		
	n	%	n	%	p-value
Sex					
Men	343	78.1	272	88.0	<0.001
Women	96	21.9	37	12.0	
Age					
20-33 years	101	23.2	158	51.8	<0.001
34-59 years	335	76.8	147	48.2	
Educational level					
Primary studies or lower	139	31.7	48	15.7	<0.001
Secondary studies or higher	299	68.3	258	84.3	
Cohabitation status (6 months prior to interview)					
Living alone	131	29.8	151	48.9	<0.001
Not living alone	308	70.2	158	51.1	
Occupation (6 months prior to interview)					
Employed	98	22.6	74	24.1	>0.05
Unemployed, student or other	336	77.4	233	75.9	
Use of drug treatment centers (6 months prior to interview)					
No	124	28.3	195	63.1	<0.001
Yes	315	71.8	114	36.9	
Perceived health status					
Excellent or good	164	37.7	131	42.8	>0.05
Normal or bad	271	62.3	175	57.2	
Main injected drug (6 months prior to interview)					
Heroin	181	41.3	124	40.3	
Cocaine	186	42.5	71	23.1	<0.001
Heroin + Cocaine	69	15.8	110	35.7	
Others	2	0.5	3	1.0	
Freq. of injection (6 months prior to interview)					
Daily	192	43.7	178	57.6	<0.001
Less than daily	247	56.3	131	42.4	
To have ever used Injection with used syringe					
Yes	252	57.5	132	42.9	0.004
No	186	42.5	176	57.1	
Age at 1st injection					
11-20 years	276	62.8	140	45.3	<0.001
21-46 years	163	37.1	169	54.7	
1st injected drug					
Heroin or opiates	338	77.5	230	76.1	
Cocaine	59	13.5	35	11.6	<0.043
Heroin + Cocaine	39	8.9	34	11.3	
Others (ketamine, etc.)	1	0.23	3	0.9	

Table 2
Characteristics (n, %) of Eastern European and non-Eastern European immigrant injected drug users attending Harm Reduction Centers in Catalonia (2008-2009).

	Eastern European		Other Origin		
	n	%	n	%	*p*-value
Sex					
Men	156	88.1	116	87.9	>0.05
Women	21	11.9	16	12.1	
Age					
20-33 years	104	59.1	54	41.9	0.003
34-59 years	72	40.9	75	58.1	
Educational level					
Primary studies or lower	19	10.8	29	22.3	0.006
Secondary studies or higher	157	89.2	101	77.7	
Cohabitation status (6 months prior to interview)					
Living alone	70	39.5	81	61.4	<0.001
Not living alone	107	60.5	51	38.6	
Occupation (6 months prior to interview)					
Employed	51	28.8	23	17.7	0.024
Unemployed, student or other	126	71.2	107	82.3	
Use of drug treatment centers (6 months prior to interview)					
No	128	72.3	67	50.8	<0.001
Yes	49	27.7	65	49.2	
Perceived health status					
Excellent or good	88	50.3	43	32.8	0.002
Normal or bad	87	49.7	88	67.2	
Main injected drug (6 months prior to interview)					
Heroin	69	39.2	55	41.7	
Cocaine	19	10.8	52	39.4	<0.001
Heroin + Cocaine	86	48.9	24	18.2	
Others	2	1.1	1	0.7	
Freq. of injection (6 months prior to interview)					
Daily	103	58.2	75	56.8	>0.05
Less than daily	74	41.8	57	43.2	
To have ever used Injection with used syringe					
Yes	73	41.2	59	45.0	>0.05
No	104	58.8	72	55.0	
Age at first injection					
11-20 years	88	49.8	52	39.4	>0.05
21-46 years	89	50.2	80	60.6	
1st injected drug					
Heroin or opiates	144	83.7	86	66.2	
Cocaine	9	5.2	26	20.0	<0.001
Heroin + Cocaine	19	11.1	15	11.5	
Others (ketamine, etc.)	0	0	3	2.3	
1st drug consumed					
heroin or opiates	124	71.7	42	32.6	
Cocaine	10	5.8	19	14.7	<0.001
heroin + Cocaine	17	9.8	8	6.2	
Cannabis	17	9.8	55	42.6	
Others (benzodiazepine, extasy, etc.)	5	2.9	5	3.9	
Initiation of drug consumption					
Prior to arrival in Spain	136	76.8	99	75.0	>0.05
After arrival in Spain	41	23.2	33	25.0	
Initiation of injected drug use					
Prior to arrival in Spain	124	70.1	74	56.1	0.011
After arrival in Spain	53	29.9	58	43.9	
Duration of residence in Spain					
↖5 years	130	76.0	58	45.0	<0.001
→5 years	41	24.0	71	55.0	

Moreover, we also observed marked heterogeneity among immigrant IDUs in function of their country of origin (Table 2). IDUs from Eastern European countries were younger (59.1% were 20-33 years old) than those from other countries (41.9%) and had generally been residing in Spain for a shorter period of time (76% of Eastern European IDUs had been residing in Spain for ≤5 years, compared to 45% of those from other countries (p-value<0.01).

Moreover, IDUs from Eastern Europe had better social conditions, a higher level of education (89.2% had completed secondary level education or higher, compared to 77.7% of IDUs from other countries), and had higher rates of employment (28.8% and 17.7%, respectively). Eastern European IDUs also differed from IDUs from other countries in terms of their patterns of drug consumption, consuming higher proportions of heroin. In general, Eastern European IDUs also had better perceived health status than other IDUs (p-value<0.01) and less proportion used drug treatment centers (27.7% compared to 49.2%, respectively).

Most immigrant IDUs that started using illegal drugs in their countries of origin had arrived in the host country during the previous 5 years (83.5% of Eastern Europeans; 70.5% of those from other countries). This proportion was lower among those who started using illegal drugs after their arrival in the host country. The individuals in the latter group were also generally older when they began using drugs, regardless of their origin (87.4% of those who began using drugs in the host country were aged 21-46 years, compared 34.3% of those who started using illegal drugs in their country of origin; Table 3).

Differences in migratory process among immigrant IDUs

In general, immigrants started using injected drugs before their arrival in the host country (76.8% of Eastern European immigrants and 75% of those from other origins) (Table 3). We observed notable differences between Eastern European immigrants and those of other origins in terms of the drug used when they first began injecting. Eastern European immigrant IDUs who started using drugs in their country of origin used heroin almost exclusively (97.1%), while those who started in the host country used heroin alone (53.9%) or in conjunction with cocaine (28.9%). Similarly, IDUs from other countries who started injected drug consumption in their home country primarily used heroin (76.1%), and those who started in the host country used cocaine more frequently (alone or in conjunction with heroine) (43.8%). In general, however, Eastern European IDUs mainly used cocaine plus heroin, independently of whether they started consumption in the origin or host country (42.6% and 58.8%, respectively); IDUs from other countries mainly used cocaine alone.

Table 3
Descriptive bivariate statistics: initiation of drug injection among immigrant injected drug users (all, and stratified by origin) attending Harm Reduction Centers in Catalonia (2008-2009)

	Eastern European			Other origin			Total		
	Began injected drug use in			Began injected drug use in			Began injected drug use in		
	origin country	*host country*		*origin country*	*host country*		*origin country*	*host country*	
	n=108 (%)	n=52 (%)	*p*-val	n=88 (%)	n=33 (%)	*p*-val	n=208 (%)	n=74 (%)	*p*-val
Sex									
Men	84.4	94.3	>0.05	84.1	89.7	>0.05	84.3	91.9	>0.05
Women	15.6	5.7		15.9	10.3		15.7	8.1	
Age									
20-33 years	65.1	48.1	0.039	52.5	29.8	0.013	60.6	38.5	<0.001
34-59 years	34.9	51.9		47.5	70.2		39.4	61.5	
Mainly injected drug (during the 6 months prior to interview)									
Heroin	47.2	28.3		47.6	37.9		47.4	33.3	
Cocaine	10.2	13.2	>0.05	36.5	44.8	>0.05	19.9	29.7	>0.05
Heroin + Cocaine	42.6	58.5		14.3	17.2		32.2	36.9	
Others	-	-		1.6	0.1		0.6	0.1	
Age at first injection									
11-20 years	65.1	15.1	<0.001	66.7	10.3	<0.001	65.7	12.6	<0.001
21-46 years	34.9	84.9		33.3	89.7		34.3	87.4	
1st drug injected									
Heroin or opiates	97.1	53.9		72.6	56.1		88.0	55.1	
Cocaine	0	17.3	<0.001	16.1	26.3	0.036	5.9	22.0	<0.001
Heroin + Cocaine	2.9	28.8		6.5	17.5		4.2	22.9	
Others (ketamine, etc.)	-	-		4.8	0.1		1.8	-	
Duration of residence in Spain									
Up to 5 years	83.5	58.5	0.001	70.5	15.5	<0.001	78.7	36.1	<0.001
More than 5 years	16.5	41.5		29.5	84.5		21.3	63.9	

Discussion

Main findings of the study

The main findings of this study, carried out in Catalonia, can be summarized in three key points. 1) There are important differences between immigrant and native Injected Drug Users (IDUs). Immigrant IDUs are more likely to live alone, to start injection at a later age, to use mainly heroin to inject more frequently with less syringe sharing and to use drug treatment centers in less proportion. 2) There are considerable differences between immigrant groups during the migratory process. Most commonly, Eastern European immigrants begin illegal drug injection in their country of origin and start with heroin consumption more often than IDUs from other countries. 3) After their arrival in Spain, both immigrant groups extend their use of injected illegal drugs to cocaine, in addition to heroin use.

Strengths and limitations

Although the results of this study cannot be extended to IDUs in general, due to the limited attendance at harm reduction centers of more socially integrated sporadic users, this study addresses the current lack of information on immigrant IDUs in Europe. In this study, we used an efficient means of recruiting high risk users, which is often an important limitation in this type of study, since illegal drug consumers are usually hidden in society (Rossi, 1999). In this sense, even though we cannot assure that the sample is representative of opioid injectors as a whole in Catalonia, this study reaches out a large sample of a hidden population to which is generally very difficult to have access to and that bears enormous social barriers. The sample is representative of those injecting opioid users who attend Catalonian harm reduction centers, since assignment to strata was proportional to the volume of visits in each center and to the percentage of individuals in each center by country of birth, and since sample selection was random within the centers. Although we could only distinguish between Eastern European and non-Eastern European immigrants, we believe that our results are informative because IDUs from the Eastern European countries represent a high proportion of the immigrants recruited in harm reduction centers. It is important to consider the Eastern European Immigrants separately, because they are a high risk group to become users of injected drugs (Isralowitz, Straussner, & Rosenblum, 2006) due to the specific behaviours they have (Freixa & Meroño, 2011).

Drug consumption and its relationship to the migratory process

In recent years, immigration and the initiation of drug consumption, either in the country of origin or in the host country, has generated intense political and social debate. Our results are consistent with those of a previous study in a sample of drug treatment centers attendees (Tordable Merino et al., 2010) in showing that most immigrant IDUs start drug consumption in their own country rather than in the host country. Moreover, we show that patterns of drug consumption differ between immigrant groups. A qualitative study carried out in Spain reported differences in drug consumption during the migratory process as a function of the country of origin (Freixa & Meroño, 2011). In our study, however, we found that all immigrant IDUs have two characteristics in common. First, they adopt the consumption patterns of the host country (e.g. changing from cannabis to heroin/cocaine or starting with injected cocaine plus heroin) (Tordable Merino et al., 2010), and second, regardless of the country of origin, their drug dependency or consumption (e.g. poly-consumption or introducing endemic substances) deteriorates after the arrival in the host country. These results have been confirmed by the qualitative study that found that as a result of social disadvantages, corruptive influences and easier access to drugs (especially cocaine), immigrants worsen their drug consumption pattern after arriving in Catalonia (Freixa & Meroño, 2011).

In this study, we have found that immigrant IDUs tend to adopt consumption of the most popular drug in the host country (cocaine, in the case of Spain) but without quitting the drug consumed in their country of origin (most frequently heroin, in the case of European Eastern IDUs), thereby becoming poly-consumers. This effect could result in a reversal of the trend of diminishing consumption of heroin in Spain (Sanchez-Niubo et al., 2009), and could even have the more problematic effect of influencing the types of drugs injected by native users and consequently the trafficking of heroin. Thus, natives may adopt immigrant patterns of use. This occurred in The Netherlands where the habit of using heroin by the pulmonary route (chinesing or smoking dragon) instead of injection spread from the Surinam immigrant community which had acquired it in 1970s after contacts with Chinese drug traffickers and users (Kaplan, Janse, & Thuyns, 1986). Therefore, interventions focused on immigrant IDUs could be important for to avoid the return of past social and health problems associated with heroin consumption.

Use of Drug Treatment Centers

In our study, immigrant drug injectors used drug treatment centers less frequently than natives in the 6 months prior to interview. Thus, efforts should be made to increase the use of Harm Reduction Centers by immigrants as a point of access to drug treatment centers. Factors that may represent important barriers to immigrants' access to health care services include language deficiencies, the fact that immigrants may be less familiar with the functioning of the health system, the ignorance of their right to health, or even that illegal immigrants may not use health services fearing that this could trigger deportation proceedings (Antón & Muñoz de Bustillo, 2010; Lindert et al., 2008). Moreover, the work with immigrants IDUs has to go further than facilitating the access to drug treatment centers since some collective of immigrants may have considerably lower success rates in all treatment outcomes compared to the native when enrolled in drug treatment centers (Specka, Buchholz, Kuhlmann, Haasen, & Scherbaum, 2010).

Time living in Spain and Drug Use

Our results indicate that more than half of IDUs who have resided in the host country for more than 5 years start using drugs after their arrival, whereas most of those who have been resident for less than 5 years begin drug use before leaving their country of origin. This may represent a changing immigrant profile, from one of drug initiation after arrival, possibly as a result of the integration process, to one characterized by the adoption of new patterns of drug use by individuals who already have an established history of use. Although this point needs to be further investigated, our preliminary results are in agreement with those of several studies carried out in the USA, which found that duration of residence was a predictor of alcoholism and drug use among Puerto Rican adults and adolescents (Fernandez-Pol et al., 1985; Velez & Ungemack, 1989). A similar pattern was observed among foreign-born Cuban and Nicaraguan students in terms of their use of alcohol and illicit drugs (Warheit, Vega, khoury, Gil, & Elfenbein, 1996). Among immigrants that initiate drug use in the host country, this phenomenon could be explained by the "healthy immigrant" effect (McDonald & Kennedy, 2004). Initiation of drug use after a certain period of residence in the host country can become a method for desensitizing an individual to day-to day stresses related to the migration process (Alaniz, 2002).

Public Health implications

In our study we saw that immigrants didn't give up the illegal drugs they used to consume in their country of origin (mainly heroine in immigrants from East Countries) once they arrived at Catalonia. Furthermore, they added to their consumption pattern the illegal drug that is most consumed in Catalonia (cocaine). This could cause an important public health problem because if they don't change their consumption pattern the drug market will change and this could change the consumption pattern of the autochthonous drug consumers. Furthermore, we also saw that immigrants have more barriers to access the drug treatment centers. Because of this, appropriate measures should be promoted in order to eliminate these barriers and to avoid

the extension of unhealthy behavior that could provoke an extension of illnesses like tuberculosis or HIV. This means that drug politics should not forget about immigrants, specially those who are in an irregular administrative situation, and that active politics should be promoted to attract this population to the public health resources.

Conclusions

Drug use is often a dynamic and evolving process that varies greatly in meaning and significance between cultures and individuals. Migration to another country can be accompanied by initiation and/or increase in drug use, with a tendency to adopt local patterns of drug use with increasing duration of residence in the host country. The findings of this study highlight the need for further research and for culturally appropriate intervention and prevention services aimed at immigrant groups. Further studies about which are the risk factors to change the pattern of drug consumption in immigrant population, the development and evaluation of programs addressed to immigrants and a more complex analysis of the injected drug consumption determinants among immigrants is needed. When developing new strategies to tackle the problem of injected drug use, immigrant's duration of residence should be taken into account.

Conflict of interest

The authors have not transmitted any conflicts of interest.

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