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Access to health services for problematic use of illegal psychoactive substances among natives and non-natives: a study in the metropolitan area of Bologna

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Abstract

Aim. To estimate access to health services among subjects with problems due to the use of psychoactive substances among people born abroad (non-natives) and to draw comparisons with those born in Italy (natives) using several data sources.

Design. Analysis of the new accesses for problematic use of illegal substances in the health services (hospital, emergency unit) and in the services dedicated to drug addicts (SERT) in the metropolitan area of Bologna in the period 2004/2011.

Results. No significant differences are recorded in regard to the substances used and the standardized incidence rate per 10 000 (natives males 10.72, females 3.93; non-native males 10.39, females 3.23).

Among the non-natives, younger and with a higher percentage of females as compared with the Italians, there is a lower likelihood of access to the SERT.

Conclusions. The data reported describe the complexity of a problem that ought to be carefully monitored in the territory.

Key words

- non-natives
- study of incidence
- opioids
- cocaine
- cannabis

INTRODUCTION

In Italy the number of non-native residents has tripled over the last ten years, with a ratio of 1:2 as compared with the Italians [1]. As compared with the natives on average they are younger, with a higher level of education, and with a substantial presence of unmarried women emigrating from Eastern European countries. This is a migratory flow that is both legal and clandestine of people with low expectations and willing to accept any working conditions, coming mainly from poor countries [2].

This demographic band constitutes a target population that is wholly peculiar from the socio-health stand- point, owing to the extreme demographic and ethnic heterogeneity, the particular sex and age distribution, the different social integration, the different habits of life and cultural backgrounds [3, 4].

From the analyses of the National Institute of Statistics (ISTAT) a picture of a population emerges with health needs that are quite similar to those of the Italian population and on average in better conditions of health, but with a lower access rate to specialist health examinations and lower hospitalisation rates, and a higher frequency, as compared with the natives, of subjects who turn to the emergency units. These are data that are also confirmed by other Italian [5] and European studies [6-9] where, however, it is pointed out that migrant status alone does not seem to be a predictor of the inappropriate use of emergency structures [10].

If the presence of immigrants rises, in order to promote adequate intervention programmes and prevention initiatives, it also becomes important to monitor the particular lifestyles connected to the use and abuse of psychoactive substances. Indeed, in this field, the knowledge available in our country is insufficient and seldom manages to give an up-to-date idea of a constantly evolving phenomenon [11-17]. While in Italy it is estimated that 15% of the accesses for cocaine are attributable to non-natives [18], recent European studies report a high consumption of opioids and alcohol abuse among immigrants, diversified on the grounds of area of orgin and gender [19-23].

Apart from the specific characteristics of mobility and invisibility, which make a continuing relationship with the network of health services difficult for subjects who do not reside stably in a certain territory or do not have a permit of stay, the non-native population rarely accesses the services for addiction and the epidemiological data available are partial and limited. It is difficult to retrieve reliable sources on which to make unbiased estimates, there is a lack of systematic assessments on which to construct historical series, and the data collection is often methodologi-

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Table 1
Period 2004/2011 Metropolitan area of Bologna: access to the services for problematic consumption of illegal substances – incidence cases

					Mean age		
		Natives	Non-natives	P value	Natives	Non-natives	T Test
	Total	2682	489		33.6	30.5	< 0.0001
Sex	% Females	25.7	27.4	0.437	35.1	32.3	0.017
1st contact	% SERT	49.3	38.4	< 0.0001	31.2	29.7	0.0345
	% Emergency unit	35.7	45.8		35.3	30.7	< 0.0001
	% Hospital	15.0	15.7		38.0	31.8	< 0.0001
Substance	% Opioids*	37.8	35.2	0.262	32.6	30.7	0.0191
	% Unspecified	29.9	35.6	0.013	38.4	31.8	< 0.0001
	% Cocaine*	19.0	19.8	0.657	33.7	31.3	0.0078
	% Cannabis*	13.9	11.7	0.188	27.4	24.4	0.0140
	% Benzodiazepine*	1.2	2.5	0.035	37.4	32.1	0.1998
	% Amphetamines *	1.1	0.8	0.598	31.2	33.3	0.7223
	% Ecstasy*	0.5	0.2	0.347	23.1	42.0	-
	% Hallucinogens *	0.4	0.8	0.287	22.7	21.0	0.5560
	% Ketamine*	0.4	0.6	0.444	28.1	39.3	0.1171

* Multiple responses

cally incorrect [15]. It follows that the available knowledge is limited and rarely provide an up-to-date impression of a phenomenon that is continuously evolving.

The aim of this study, based on the new cases of resident accesses for problems due to the abuse of illegal psychoactive substances (problematic consumption) in the health facilities of the Bologna metropolitan area distinguished between those born in Italy (natives) and those born abroad (non-natives), is to describe that issue among the non-native population by combining several different sources.

As there is a lack of specific studies in Italy, particular attention will be addressed to the description of the main characteristics of these subjects in relation to their country of origin.

MATERIALS AND METHODS

Case definition

Subjects resident in the metropolitan area of Bologna, aged between 15 and 64 years who turned for the first time to a public or private services for problems caused by the use/abuse of illegal substances, were selected. Only voluntary accesses were considered, excluding the subjects detained in prison with mandatory access, those referred by the chief of police, and so-called "body packers".

The period of reference ranges between 2004 and 2011; the territory is the metropolitan area of Bologna, excluding the villages of San Giorgio di Piano, San Giovanni in Persiceto and Sant'Agata Bolognese, for which no data were available for residents separated by country of birth.

The data relating to the hospital dismissals and accesses to the emergency units were provided by the Information Technology (IT) system of the Bologna Local Health Authority; the data relating to the SERT users were gleaned from the digital social and health folders in which, starting from 1978, the subjects are distinguished by the date of first admittance.

Each person may have had contacts with several intervention sectors and the information were collected at the first contact. The cases were selected from the IT systems of SERT (10 health services), emergency units (9 units), and hospitals (10 structures) and as an "incident case" the subjects who had not been admitted to the SERT before 01/01/2003 were considered.

Variables relating to age, gender, country of birth, residence, substance of abuse, contact sector, date of contact were used. The substances of abuse may have been more than one, excluding the SERT, where the primary substance was considered. It is worth mentioning that, on the grounds of the selection criteria, both at the emergency unit and at the hospital the substance of abuse could not be specified.

On the grounds of the country of birth, the non-natives were divided into six groups: highly developed countries (HDC), European Union member countries (EU), other European countries, Asia, Africa, America (excluding the US and Canada, inserted in group HDC) [24].

Data sources

At the SERT a digital regional folder is used to collect the data at the first admission, the personal data, health data, treatments undertaken and substances of abuse. The admission involves the definition and the start-up of a therapeutic project agreed upon with the user in line with the diagnostic evaluation.

By means of the use of key words gleaned from the ICD IX handbook, from the databases of the emergency units, the examinations correlated to the abuse of illegal substances were selected. The information was retrospectively obtained and each case was analysed individually

Table 2
Period 2004/2011 metropolitan area of Bologna: access to the services for problematic consumption of illegal substances – incidence cases per year of initial contact

	Natives				Non-natives			
	2004/5	2006/7	2008/9	2010/11	2004/5	2006/7	2008/9	2010/11
Cases	715	702	695	570	106	121	125	137
Mean age	32.2	33.7	33.8	35.2	30.7	31.5	29.5	30.4
% Females	23.4	26.8	25.3	27.9	26.4	20.7	30.4	31.4
% SERT	51.6	47.6	48.2	50.0	39.6	39.7	37.6	37.2
% Hospital	15.5	11.5	11.8	22.3	14.2	11.6	8.8	27.0
% Emergency unit	32.9	40.9	40.0	27.7	46.2	48.8	53.6	35.8
% Opioids*	38.2	40.0	39.0	33.3	34.9	40.5	32.0	33.6
% Cocaine*	17.3	19.4	18.0	21.8	19.8	21.5	21.6	16.8
% Cannabis*	19.9	9.4	10.1	16.5	15.1	9.1	8.8	13.9
% Unspecified	25.9	31.3	33.5	28.9	34.9	33.1	35.2	38.7
% Other*	18.9	14.7	13.5	18.6	17.9	15.7	24.0	19.0

* Multiple responses

by a team made up of sociologists, psychologists, psychiatrists and epidemiologists [18].

As regards the hospital admissions, the data from the hospital dismissal forms (HDF) were used and, on the grounds of the ICD-IX classification, the subjects with dismissal diagnosis (both principal and secondary) correlated to psychosis induced by drugs, drug addiction, abuse of drugs without addiction, poisoning from opioids or psychotrope substances were selected [25]. The diagnoses considered are the following: drug-induced psychoses (ICD IX 292); drug addiction (ICD IX 304), drug abuse without addiction (ICDIX 305), oppioid poisoning (ICD IX 965), psychotropic substance poisoning (ICD IX 969).

Statistical analyses

The differences between natives and non-natives as compared with the continuous and categoric variables were analysed with Student's T test and the chi-sqaure test, respectively.

The resident population divided by country of birth, provided by the Office of Statistics of the Province of Bologna, was only available for 2011 for all the municipalities of the metropolitian area of Bologna excluding San Giorgio di Piano, San Giovanni di Persiceto and Sant'Agata Bolognese. Separately for natives and non-natives, using the resident population aged 15-64 years, the incidence rates standardized by age (standard Italy 2011) were calculated, while the relative confidence intervals were calculated at 95% for gender and aggregated area of birth.

To analyse the profile of the subjects with problematic consumption of psychoactive substances in relation to the country of birth (non-natives *vs* natives) a multivariate analysis was performed using the logistic regression and the odds ratio and respective confidence intervals were calculated at 95% [26]. The variables relating to gender, age (< 40 years, ≥ 40 years), period of first access (2004/5, 2006/7, 2008/9, 2010/11), source of first access and substances detected at first access were used. Stata 11.0 was used for the analyses [27].

RESULTS

Over the whole period there were 2730 accesses of natives and 441 of non-natives.

As regards the first access, it is more frequent at the emergency unit among the non-natives and at the SERT among the natives. The data are reported in detail in *Table 1*.

Among the non-natives, younger on average and with a higher percentage of females as compared with the Italian, one access in three is for opioids, one in five for cocain and on in ten for cannabis. As compared with the Italians, there is a higher quota of subjects with unspecified substance and benzodiazepine, lower for oppiods and cannabis, similar for all the other substances. As regards the mean age, for the non-natives as compared with the Italians, it is significantly lower for the single sources of first access , for cocaine, cannabis and unspecified substance.

Trend

As regards the trend over time, the mean age increases among the natives and remains stable among the non-natives, instead the percentage of females increases in both the groups *(Table 2)*.

As regards the source of the first contact, both among the natives and the non-natives, albeit with a volatile trend, the percentage of hospital admissions increases, the quota of accesses at the emergency unit decreases and that of the admissions at the SERT remains stable.

Among the natives there is a drop in the quota of subjects with opioid and cannabis abuse and an increase for cocaine, among the non-natives the figure relating to the opioids is stable and decreases for cocaine and cannabis, but it should be borne in mind that the quota of subjects with unspecified substances increases in both groups.

The non-natives

As regards the aggregate birth areas , 35.2% were born in African countries, 18.2% in non-EU European countries, 13.9% in EU-area European countries, 15.3% in HDC, 9.6% in Asia, 7.8% in America *(Table 3)*.

The youngest subjects were born in European countries, both EU area and non-EU; the eldest were born in Asian countries or HDC.

As regards the substance of abuse, for cocaine those born in Africa and American are reported, for the opioids in HDC and Asia, for cannabis in America and Africa.

In the period considered, where the flow of those born in European countries in rising constantly, the numeric trend, albeit volatile, presents a growth in all the areas, except for the subjects born in highly developed countries, which are decreasing.

Standardized rates

In the target population, in regard to 2011, the standardized rates per ten thousand residents were higher among the males than the females and in neither sex was there any significant difference between natives and non-natives *(Table 4)*.

As regards the area of birth, among the males the standardized rate per ten thousand residents is higher for the subjects born in Africa, and among the females for the subjects born in America *(Table 4)*.

Multivariate analysis

From the multivariate analysis it emerges that among the subjects with problematic consumption of illegal psychoactive substaces, there is an association between country of birth and age lower than 40, and access to an emergency unit (rather than to the SERT) *(Table 5)*. This means that for the non-natives, as compared with the natives, the first access to the health services is more likely to occur at the hospital or the emergency department.

It should be noted that there are no differences in terms of substance abuse.

DISCUSSION

This study, which is based on data coming from several healthcare sources, analyses the access to health services for problematic consumption of illegal psychoactive substances and its different trends among the residents of the metropolitan area of Bologna, broken down into natives and non-natives on the grounds of country of birth, in the period ranging between 2004 and 2011.

While there are no differences in regard to the standardized incidence rates and the different substances of abuse, among the non-natives there is lower access to the continuous care services.

Among the non-natives it is worthwhile pointing out a high incidence of males born in the African countries and of females born in America.

The numeric trend presents a rise for all the areas, except for the subject born in highly developed countries, which are falling.

First of all, a population of subjects with a problematic use of illegal substances emerges who, starting from birth, is distinguished on the grounds of age and gender, but not the substance of abuse, where we do not find any particular differences.

The second aspect that emerges is connected to the source of initial contact, more frequent for the non-natives at the emergency unit or at the hospital, with a lower likelihood of accesses to specialist treatments as compared with the Italians. This could mean a greater incidence of accesses for acute events not connected to addictions, but the data stemming from the different sources, where we do not find statistically significant differences as compared with the reasons for access and the primary substances of abuse, do not seem sufficient for a confirmation of such a hypothesis.

This study presents numerous limits stemming from the use of the data gathered for other purposes for epidemiological purposes, and not immediately comparable, in that the subjects access the different healthcare services for diagnoses of different severity, probably with systematic differences on the grounds of the place of access.

For reason of feasibility, this study only analyses the residents while the illegal immigrants are completely missing and this limits its generalisability among the non-natives.

For the "case definition" the country of birth was used and this has prevented more accurate analyses, above all among the foreign-born Italians and among the offspring of immigrants (second generation immigrants).

The limits listed above are just a part of the objective difficulties that are encountered in observing a phenomenon that is in itself both complex and elusive (the consumption of psychoactive substances) in a population that is highly heterogenous with specific mobility characteristics (*i.e.* the non-natives), and it should be noted that comparisons with other papers cannot be made in that, apart from the few studies already cited [11-23], specific research is lacking.

We can thus state that we are not faced with people who are "healthier" and "less problematic" than the natives, but that it is a large and potentially rising number that addresses a precise request for treatment to the health system where a difficulty arises in the access to the specialist services for drug addicts.

In the literature the migrants are described as people who move chiefly for reasons of work and who bear with them a reserve of good health so that on average the group is considered to be healthier, in which people who do not enjoy good health return to their country of origin, both as a result of limitation to access to the health services and as a result of their poor knowledge of the possible health care options [5]. This analysis does not seem to apply to our case, where specific problems seem to be coming to light that hamper access to the SERT, and further studies are necessary to deepen these aspects .

In this regard, we should point out what has emerged from recent European studies, which it would be useful to replicate in the field of dependence, where the most frequent problems for the immigrants are reported (*i.e.* language barriers, absence of familiarity with the health system, fear of retaliation), for the operators (*i.e.* lack of access to the prior medial history, difficulties in guaranteeing care for people without health cover, interpersonal difficulties, differences in the conception of health, illness and care, cultural differences) and in the relationship between immigrants and health operators (*i.e.* negative rapport between staff and patients) [28, 29].

The foreign population is unlikely to access the services for the treatment of addictions and the epidemiological data are partial and limited to the crime and prison statistics, implicitly reflecting labelling mechanisms [21].

Table 3
Period 2004/2011 access to services for problematic consumption of illegal substances – Non-native characteristics per area of birth

	HDC	EU Europe	Other Europeans	Asia	Africa	America	P Value
Cases	75	68	89	47	172	38	
% Females	29.3	51.5	31.5	12.8	14.5	47.4	< 0.0001
Mean Age	32.6	29.2	27.5	33.7	30.5	31.8	
% Opioids	48.0	23.5	40.4	42.6	33.1	18.4	0.005
% Cocaine	21.3	13.2	14.6	6.4	27.3	23.7	0.009
% Cannabis	4.0	8.8	7.9	6.4	16.9	23.7	0.004
% Other	16.0	30.9	18.0	19.1	18.6	10.5	0.134
% Unspecified	26.7	57.4	34.8	44.7	26.2	47.4	< 0.0001
% 2004/2005	24.0	16.2	19.1	21.3	24.4	21.1	0.035
% 2006/2007	26.7	14.7	22.5	17.0	31.4	23.7	
% 2008/2009	33.3	30.9	29.2	31.9	15.7	28.9	
% 2010/2011	16.0	38.2	29.2	29.8	28.5	26.3	

Table 4
Year 2011 Metropolitan area of Bologna: incident cases of problematic consumption of illegal substances – standardized rates per 10 000 residents (Standard Italy 2011)

	Males			Females		
	Cases	**Rate**	**95% CI**	**Cases**	**Rate**	**95% CI**
Natives	213	10.72	9.27-12.18	79	3.93	3.05-4.80
Non-natives	48	10.39	7.25-13.53	18	3.23	1.71-4.76
HDC	4	14.36	0-29.73	1	1.48	0-4.37
EU Europe	6	8.14	1.29-14.99	6	4.99	0.94-9.03
Other Europeans	6	5.90	1.18-10.62	3	2.16	0-4.61
Asia	5	6.22	0-12.58	0	-	-
Africa	26	22.54	13.53-31.55	3	4.71	0-10.44
America	1	2.45	0-7.24	5	8.51	1.0-16.02

Table 5
Period 2004/2010 metropolitan area of Bologna: incident cases of problematic consumption of illegal substances – profile of non-natives *vs* natives – logistic regression

		Odds Ratio	95% CI
Gender	Males	1	
	Females	1.05	0.84-1.32
Age	≥ 40 years	1	
	< 40 years	2.50	1.92-3.27
Source of initial contact	SERT	1	
	Hospital	1.45	1.05-2.02
	Emergency Unit	1.75	1.36-2.27
Substance at initial contact	Opioids	1.52	0.92-2.50
	Cocaine	1.51	0.93-2.44
	Cannabis	1.13	0.66-1.94
	Unspecified substance	1.60	0.93-2.73
	Hallucinogens	2.10	0.61-7.25
	Amphetamines	0.94	0.30-2.96
	Ecstasy	0.46	0.06-3.69
	Ketamine	1.78	0.46-6.94
	Benzodiazepine	1.56	0.78-3.13

Indeed, the source of the data used to describe the phenomenon does not seem to be a neutral element when the subject of analysis are the migrants [22, 23].

Knowing the prevalence of the problematic use of psychoactive substances among the non-natives is important for the targeted initiatives and in order to plan the activities of the healthcare services addressed to addictions as well as to rationalise health spending.

The data reported in this article, albeit with all the limitations mentioned above, not only describe the extent and the complexity of a problem that ought to be carefully monitored in the territory, but also show that it is possible to design studies on non-natives with comparative analyses in the resident population.

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REFERENCES

1. Caritas. *Dossier statistico immigrazione*. Caritas-Migrantes; 2010. Available from: www.dossierimmigrazione.it.
2. Ruggiero V. Stranieri e illegalità nell'Italia criminogena. *Diritto immigrazione e cittadinanza*
3. 2008. Available from: www.temi.repubblica.it/micromega-online.Perna GP, Carletti P, Deales A, Gabrielli D, Perna V. Strategie differenziate nelle popolazioni target: i migranti. *G Ital Cardiol* 2010;11(5 suppl 3):1025-55.
4. ISTAT. *Salute e ricorso ai servizi sanitari della popolazione straniera residente in Italia anno 2005*. ISTAT; 2008. Available from: www.istat.it.
5. Baglio G, Saunders C, Spinelli A, Osborn J. Utilisation of hospital services in Italy: A comparative analysis of immigrant and Italian citizens. *J Immigr Minor Health* 2010;12:598-609. DOI: 10.1007/s10903-010-9319-7
6. Norredam M, Nielsen S, Krasnik A. Migrants' utilization of somatic healthcare services in Europe - a systematic review. *Eur J Public Health* 2010;20(5):555-63. DOI: 10.1093/eurpub/ckp195
7. Antón JI, Muñoz de Bustillo R. Health care utilisation and immigration in Spain European. *J Health Econ* 2010;11(5):487-98. DOI: 10.1007/s10198-009-0204-z
8. Norredam M, Krasnik A, Moller Sorensen T, *et al*. Emergency room utilization in Copenhagen: a comparison of immigrant groups and Danish-born residents. *Scand J Public Health* 2004;32(1):53-9. DOI: **10.1080/14034940310001659**
9. Devillanova C. Immigrants' access to health care services in Italy: New evidence from survey data. *Econpubblica* 2012;166:1-30. Avaible from: http://www.econpubblica.unibocconi.it/folder.php?vedi=4918&tbn=albero&id_folder=1306.
10. David M, Schwartau I, Anand Pant H, Borde T. Emergency outpatient services in the city of Berlin: Factors for appropriate use and predictors for hospital admission. *Eur J Emerg Med* 2006;13(6):352-7. DOI: 10.1097/01.mej.0000228451.15103.89
11. Giancane S. Prevalenza dell'abuso di sostanze stupefacenti e psicotrope fra i detenuti extracomunitari nuovi giunti dal Carcere di Bologna 1993-1995. *Boll farmacod alcoolismo* 1996;XIX(4):23-7.
12. Giancane S. Immigrati e droga: equivoco, miopia o malafede? *Il seme e l'albero* 1997;13:35.
13. D'Amore A, Grassini C. Mappe sociali: migranti e dipendenza nella provincia di Caserta. *Federserd informa* 2010;14:36-8.
14. Allamani A, Innocenti FB, Innocenti A, Cipriani F, Voller F. Alcohol and tobacco consumption among Albanian immigrants in Florence. *Subst Use Misuse* 2009;44(2):282-300. DOI: 10.1080/10826080802353287.
15. Monaci P. *Tossicodipendenza e immigrazione: un approccio psicosociale*. Torino: L'Harmattan Italia; 2001.
16. Pelliccia A. *Tossicodipendenza e immigrazione storie di vita*. Roma: Consiglio Nazionale delle Ricerche; 2006. Available from: www.epid.ifc.cnr.it.
17. Pelliccia A. *Alcol e immigrazione. Uno sguardo transculturale*. Roma: Consiglio Nazionale delle Ricerche; 2006. Available from: www.epid.ifc.cnr.it.
18. Pavarin RM, Lugoboni F, Mathewson S, Ferrari AM, Guizzardi G, Quaglio G. Cocaine-related medical and trauma problems: a consecutive series of 743 patients from a multicentre study in Italy. *Eur J Emerg Med* 2011;18(4):208-14. DOI: 10.1097/MEJ.0b013e3283440f25.
19. Tordable Merino I, Sánchez Sánchez A, Santos Sanz S, García Vicario MI, Redondo Martín S. Trends indrug consumption among immigrants between 2004 and 2008. *Gac Sanit* 2010;24(3):200-3. DOI: 10.1590/S0213-91112010000300004
20. De la Blanchardière A, Méouchy G, Brunel P, Olivier P. Psychological and social study in 350 patients in a precarious situation, undertaken by a permanently maintained health care facility in 2002. *Rev Med Interne* 2004;25(4):264-70.
21. Harrison L, Sutton M, Gardiner E. Ethnic differences in substance use and alcohol-use-related mortality among first generation migrants to England and Wales. *Subst Use Misuse* 1997;32(7-8):849-76. DOI: 10.3109/10826089709055862
22. Littlewood R, Lipsedge M. *Aliens and alienists: ethnic minorities and psychiatrists*. London: Routledge; 1992.
23. EMCDDA. *Mapping available information on social exclusion and drugs, focusing on "minorities"*. Lisboa: Emcdda; 2000.
24. *La salute della popolazione immigrata: metodologia di analisi*. Progetto: Promozione della salute della popolazione immigrata in Italia Accordo Ministero della salute/CCM – Regione Marche Maggio 2009. Available from: http://www.ccm-network.it/documenti_Ccm/prg_area5/Prg_5_Immigrati_metodologia.pdf.pdf.
25. Pavarin RM. Stranieri: analisi dei ricoveri ospedalieri per abuso e dipendenza da sostanze illegali. *IJA* 2011;4:5-11.
26. Clayton D, Hills M. *Statistical models in epidemiology*. Oxford: Oxford Uversity Press; 1993.
27. StataCorp. Stata: Release 11. Statistical Software. College Station (TX): StataCorp LP, 2009.
28. Priebe S, Sandhu S, Dias S, *et al*. Good practice in health care for migrants: views and experiences of care professionals in 16 European countries. *BMC public health* 2011;11:187. DOI: 10.1186/1471-2458-11-187
29. Garrett PW, Dickson HG, Young L, Klinken Whelan A. "The Happy Migrant Effect": perceptions of negative experiences of healthcare by patients with little or no English: a qualitative study across seven language groups. *Qual Saf Health Care* 2008;17(2):101-3. DOI: 10.1136/qshc.2007.022426.