

Evaluation of the impact of family relations on prisoners' health in Spain

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ABSTRACT

Objectives: Literature on this issue has shown a high prevalence of alcohol and other drug use in the prison population. Although many risk factors have been linked to this behavior in prison, it is not common to find research that analyses the influence of family/social contact in prison.

Material and method: A cross-sectional study was carried out on 2,709 inmates (2,484 men and 225 women) in 9 prisons in Spain, data was collected through self-report questionnaires, including information at socio-demographic level, family-social contact and use of alcohol and other drugs in the last month in prison.

Results: Inmates with no family contact in prison show a higher prevalence of use for all the substances analyzed, binary logistic regression analysis shows statistically significant associations with the use of cannabis (OR: 1.86, $p \leq 0.001$) or cocaine (OR: 3.40, $p \leq 0.001$) in prison.

Discussion: More knowledge about this public health problem amongst social workers in the prison environment could be an effective diagnostic and preventive tool for reducing the use of alcohol and other drugs during imprisonment.

Keywords: prisons; street drugs; family relations; social support.

Text received: 27/10/2018

Text accepted: 16/09/2019

INTRODUCTION

According to a report by the European Monitoring Centre for Drugs and Drug Addiction¹, which provides detailed information about alcohol and drug use amongst different groups of the population in Europe (general public, prisons, etc.), more than half of the persons currently in prison (approximately 55%) regularly consumed a number of different psychoactive substances in the twelve months prior to imprisonment. The most commonly consumed illegal substances include cannabis (approximately 40%) followed by cocaine (about 27%); while the figures for the general public show that consumption of the same substances drops to around 9% and 2%, respectively in the same time period¹.

Another factor is that such consumption is often uninterrupted and continues throughout the prison sentence. The health problems related to drug

consumption include: greater prevalence of sexually transmitted diseases (e.g. human immunodeficiency virus or hepatitis B or C), which is much higher than the level found amongst the general public^{2,3}; a larger number of prisoners who present severe mental disorders, such as depression, schizophrenia and/or bipolar disorder⁴; and a higher prevalence of suicide amongst consumers of alcohol and other drugs in prison in comparison to non-consumers⁵. Other important aspects of this problem include a greater risk of mortality in the first weeks after release from prison⁶, in which the risk of death during the first week of release is 30 and 70 times higher amongst men and women respectively, in comparison to the general population⁷.

Research has found consumption levels that vary between 50 and 80% in prisons in Europe⁸, the USA⁹ and South America¹⁰, which show cannabis, cocaine and heroin, respectively, to be the most widely con-

sumed substances. The bibliographical review carried out by Fazel et al.¹¹ on approximately 20,000 inmates from ten countries found a prevalence of alcohol abuse of about 25%; while the prevalence for drug consumption (including cannabis, cocaine, opiates and/or amphetamines) was from approximately 30 and 50% amongst the male and female prison population, respectively.

The most representative study in Spain on this problem was carried out by the Spanish Monitoring Centre for Drugs and Drug Addiction¹², in which a total of 5,024 male and female inmates of over 18 years of age were interviewed in order to find out more about use and abuse of alcohol and other drugs prior to and during imprisonment. What was especially striking about this study was the higher prevalence of consumption amongst men in comparison to women in the last 30 days prior to the study, which can be seen in the consumption of cannabis (men: 20.2%; women: 8.7%), followed by un-prescribed tranquilizers (men: 6.4%; women: 3.3%), heroin (men: 2.9%; women: 1.2%), alcohol (men: 2.2%; women: 1.2%) and cocaine (men: 1.4%; women: 0.7%) in prison.

The traditional risk factors associated with higher consumption of alcohol and other drugs in prison include: younger inmates (average age of 30) and those who were unemployed before going to prison⁸, with fewer qualifications¹⁰, in a previous state of poverty¹¹ and even with previous histories of victimisation¹³. However, research work that analyses the possible influence of social/family contacts on consumption in prison is not very common.

Since the mid-20th century, scientific literature on the prison context has paid special attention to the importance of social/family support as a key factor in the quality of life of prison inmates¹⁴. It has been defined as an active social support (pro-social) during a prison sentence. It has been shown to be an essential tool for: adequate functioning of the prison as an institution¹⁴, the inmate's subsequent social rehabilitation once the sentence has ended¹⁵, reduced recidivism and subsequent criminal conduct¹⁶, improved physical and mental wellbeing in prison and fewer attempted suicides during imprisonment¹⁷.

On the other hand, the absence of social support mechanisms (antisocial) during imprisonment may make it very difficult for an inmate to adapt to prison life¹⁸, besides creating further criminal outlooks and perspectives, both inside and outside prison, showing itself to be a significant risk factor for recidivism¹⁷. It is also worth noting that the absence of social and family contact has especially negative outcomes amongst the female prison population, which tradi-

tionally finds it more difficult to adapt to the prison environment than men, especially when this means a reduction and/or loss of contact with their offspring¹⁹.

However, and despite the major advances and discoveries made regarding the advantages of maintaining active social and family contacts for prison inmates, no prior research was found about its possible influence on the consumption of alcohol and other drugs by the prison population (see a possible exception: Rodríguez-Martínez et al.²⁰), although such studies have been conducted on the general public²¹.

Using the bibliographical review as a basis, and given the lack of studies on the possible influence of social/family contact on the prevalence of consumption of alcohol and other drugs in prison, the purpose of this study is to determine if social/family contact does in fact have an influence in this regard.

MATERIAL AND METHOD

An analytical transversal study was carried on inmates in nine prisons in Murcia, Granada, Alicante, Albacete, Cuenca and Toledo. At the time when the field work was carried out (in the months of January-March 2017) the prisons housed an approximate total of 5,500 inmates (5,200 men and 300 women). The inmates were selected for participation if they fulfilled the following inclusion criteria: a) more than one month of the current sentence served; b) be able to read and write in Spanish; c) willingness to participate and d) accept and sign the informed consent attached to each survey. With these criteria in mind, a total of 2,589 male and 252 female inmates were selected, while 105 male inmates (approximately 4%) and 27 female inmates (approximately 10%) were rejected. The final sample consisted of 2,709 participants (2,484 men, with an average age of 36.3 years; and 225 women, with an average age of 37.5 years).

An ad hoc questionnaire divided into three large blocks was designed for this study:

1. Social/family contact in prison: the approach used was similar to the one used in previous studies¹⁷. The inmates were asked if they had contact at least once a month with one or more family members by different means (in person, conjugal visit, telephone, postal mail, etc.). The specific question was: "Have you had contact with a member of the family and/friend over the course of the sentence?". If the answer was yes, they had to indicate the type or types of contact (1=in person; 2=telephone; 3=correspondence; and 4=conjugal visit).

2. Socio-demographic characteristics: these included the following variables: sex, nationality, marital status, educational attainment, previous imprisonments and type of crime that led to the current prison sentence.
3. Prevalence of consumption of alcohol and other drugs in prison: according to a previous study¹³, they had to indicate no (0) or yes (1) to consuming the following substances: alcohol, cannabis, cocaine (inhaled and/or freeline base) and heroin over the previous month in prison. If the inmates answered yes to any of the substances, they were classified as previous consumers.

To gather the information, the participants were divided into groups of approximately 15 persons in the common zones of each module. The questionnaires were distributed by the participants themselves, while the interviewer was present at all times clarify any possible doubts. The time for each group to complete the questionnaires was 30 to 45 minutes. A total of 25 cases were individually interviewed as a result of language problems or due to difficulties in understanding the questionnaire.

The descriptive and statistical analysis was carried out in three phases, using the Statistical Package for the Social Sciences (SPSS) in version 22.0. The first phase consisted of analysing the prevalence of social/family contact in the previous month of imprison-

ment and the different types for the total study sample and according to the participants' sex, along with the statistically significant differences using 2x2 tables. Secondly, the socio-demographic and prison variables were analysed according to whether there was social/family contact or not. Finally, the association was examined using the OR test and chi squared (χ^2) between family contacts in prison (dependent variable) and consumption of alcohol and other drugs (independent variable) over the previous month in prison, stratified for each co-variable (types of drug analysed) via binary logistic regressions, adopting a value of $p=.05$ as significant. The individuals without family contact made up the reference group for contrasting results.

RESULTS

As can be seen in Table 1, 60.3% (n=1.633) had some kind of social/family contact during imprisonment, compared to 39.7% (n=1.076) who stated that they did not. Telephone contact is the predominant type of contact for both sexes, being significantly higher for women than for men ($p=0.006$). Contact by correspondence is the second most common type, and is used by approximately half of the total population (44.6%), with significantly higher figures amongst women than amongst men ($p \leq 0.001$). Face to face con-

Table 1. Prevalence and type of social/family contact for the entire sample and according to gender

Item	Total (n=2.709)		Men (n=2.484)		Women (n=225)		P value
	n	(%)	n	(%)	n	(%)	
Social/family contact							
Some kind of contact							
Yes*	1.633	(60.3)	1.480	(59.6)	158	(70.2)	0.002
No	1.076	(39.7)	1.004	(40.4)	67	(29.8)	
Face to face							
Yes*	1.058	(39.1)	945	(38.0)	117	(52.0)	0.003
No	1.652	(60.9)	1.539	(62.0)	108	(48.0)	
Telephone							
Yes*	1.323	(48.8)	1.191	(47.9)	143	(63.5)	0.006
No	1.386	(51.2)	1.293	(52.1)	82	(36.5)	
Correspondence							
Yes†	1.207	(44.6)	1.083	(43.6)	126	(56.0)	0.001
No	1.502	(55.4)	1.401	(56.4)	99	(44.0)	
Conjugal visit							
Yes*	326	(12.0)	285	(11.5)	40	(17.7)	0.004
No	2.383	(88.0)	2.199	(88.5)	185	(82.3)	

Note. Statistically significant associations between men and women.

* $P < .01$, † $P < .001$.

Table 2. Socio-demographic and penitentiary characteristics, along with statistical relationships with dependent variable

Variables	With contact (n=1.076)		Without contact (n=1.633)		OR (95% IC)	P value
	n	(%)	n	(%)		
Sex						
Male	985	(91.5)	1,499	(91.8)	1.03 (0.79-1.35)	0.816
Female	91	(8.5)	134	(8.2)		
Nationality						
Spanish	748	(69.5)	1,361	(83.3)	2.19 (1.82-2.63)	0.001
Foreign	328	(30.5)	272	(16.7)		
Education level						
Lower than secondary school exam	635	(59.0)	1,131	(69.3)		
Secondary school exam or higher	441	(41.0)	502	(30.7)		
Marital status						
Married (reference)	242	(22.5)	291	(17.8)	1.04 (0.81-1.36)	0.752
With partner	262	(24.3)	435	(26.6)	1.02 (0.82-1.27)	0.811
Single	276	(25.7)	415	(25.4)	1.00 (0.98-1.01)	0.977
Separated/divorced	162	(15.1)	339	(20.8)	0.87 (0.66-0.86)	0.652
Widow(er)	134	(12.5)	164	(12.5)		
Imprisonment						
First time	857	(79.6)	646	(39.6)	2.97 (2.62-3.63)	0.001
Recidivist	219	(20.4)	987	(60.4)		
Crime committed						
Against property	393	(36.5)	752	(46.1)	1.48 (1.27-1.73)	0.001
Against persons	214	(19.9)	323	(19.8)	0.99 (0.81-1.20)	0.945
Against public health	349	(32.4)	351	(21.5)	1.16 (1.10-1.22)	0.008
Against sexual freedom	15	(1.4)	49	(3.0)	2.18 (0.95-3.92)	0.252
Other crime	105	(9.8)	157	(9.6)	0.96 (0.93-1.04)	0.752

Note. CI: confidence interval; OR: odds ratio.

tact in the form of visits from family members and/or friends is once again more common amongst women than amongst men (p=0.003). Finally, conjugal visits are the least frequent form for both sexes (12.0%), and are significantly more common amongst female prisoners than amongst the male ones (p=0.004).

The socio-demographic and prison characteristics for the total sample (N=2.709) can be seen in Table 2, dividing the participants into those who have or have not had some kind of social/family contact in the previous month in prison. The table shows that most of the cases were men, of Spanish nationality and with low educational attainment, where crimes against property predominated. The dependent variable showed statistically significant associations (at level p ≤0.001)

with regard to nationality, the number of previous prison sentences and crimes committed against property.

Table 3 shows the prevalence of consumption of alcohol and other drugs in the previous month's imprisonment, and the statistically significant associations with the dependent variable (social/family contact). As can be seen, the prevalence of consumption for all the substances analysed is higher amongst those inmates who have no kind of family contact when compared to those who have active family contact, and is significantly higher in the case of cannabis and cocaine with regard to the participants without any kind of social/family contact when compared to those who do have this type of contact in prison.

Table 3. Prevalence of consumption of alcohol and drugs and statistical relationships with dependent variable

Consumption	With contact (n=1.076)		Without contact (n=1.633)		OR (95% IC)	P value
	n	(%)	n	(%)		
Alcohol						
Yes	398	(37,3)	754	(46,2)	1,94 (1,16-3,25)	0,005
No	678	(63,0)	879	(53,8)		1.00 (ref.)
Cannabis						
Yes	401	(37,3)	882	(54,2)	1,86 (1,16-2,98)	0,001
No	657	(62,7)	751	(55,8)		1.00 (ref.)
Cocaine						
Yes	284	(26,4)	635	(38,9)	3,40 (1,93-6,02)	0,001
No	792	(73,6)	998	(61,1)		1.00 (ref.)
Base cocaine						
Yes	100	(9,3)	222	(13,6)	1,97 (1,22-3,19)	0,014
No	976	(90,7)	1.411	(86,4)		1.00 (ref.)
Heroin						
Yes	168	(15,6)	468	(28,7)	2,32 (1,39-3,86)	0,003
No	908	(84,4)	1.165	(71,3)		1.00 (ref.)

Note. CI: confidence interval; OR: odds ratio; ref.: reference.

DISCUSSION

In the last three decades, the growth in the prison population and the number of penitentiary establishments at national and international levels has had the immediate effect of an exponential growth in scientific research to discover more about the levels of individual and collective health of the prison population. However, it was not possible to find any prior research in Spain that focused on the objectives proposed in this study.

Firstly, the prevalence and characteristics of social/family contact during the prison sentence showed that over half of the participants had active social contacts, which were significantly more common amongst women than amongst men. It was also apparent that telephone contact was the predominant form, which was also the case in research carried out on the prison population of the USA²².

Less than half of the population received direct face to face contact via visits from family and/or friends, and were significantly more common amongst female inmates than amongst male ones, which was also found in previous studies¹⁷. At this point, it should be borne in mind that, although telephone or written contact is useful, the possibility of face to face

contact with loved ones is regarded as the most effective type of contact in prison for maintaining social links and for coping with the emotional harm inflicted by imprisonment²³.

Another of the significant demographic variables that influences greater social/family contact is nationality, since it can be clearly seen how Spanish inmates have significantly more social/family contact in comparison to foreign prisoners. This point is self-evident, given the greater difficulty that the reference groups of those who do not reside in Spain in being transferred, since most of the foreign inmates in the sample for this study came from Colombia, Morocco and Rumania, respectively. Geographical and displacement problems, and the greater degree of stigmatisation of this group, which takes the form of reduced social/family contact during imprisonment, has already been highlighted in previous research²².

Analysis of the consumption of alcohol and other drugs in prison has shown a high prevalence of use, which matches previous research carried out national²⁴ and international⁹ levels. The prevalence of consumption found was found to be especially high when compared to the data offered by the National Drug Plan (PNSD) in its EDADES study¹² (Survey on alcohol and other drugs in Spain), were the preva-

lence found amongst the general public of drugs such as cannabis or cocaine was 7% and 3%, respectively, over the same time period, while said prevalence rose to 37.3 and 54.2% in cannabis consumption and to 26.4% and 38,9% amongst inmates with and without family contact, respectively.

Finally, the results obtained from binary logistic analyses show the absence of family contact in prison to be a statistically significant association and a risk factor in prison that is associated with the consumption of alcohol and other substances, which concurs with studies carried out on this issue amongst the prison population²⁰. By way of conclusion, consumption of all the substances analysed (alcohol, cannabis, cocaine, free-line base and heroin) has been shown to be approximately from two to four times higher amongst inmates who have no exterior contacts in prison than amongst those who do have some kind of contact.

This study does have some limitations. Firstly, for reasons of security for the interviewer, there was no access to inmates held in the grade one (isolation) modules (which makes up about 3% of the total number of inmates). Secondly, to ensure participants' anonymity, no access was permitted to their prison clinical records, meaning that the information could not be subsequently collated. Thirdly, despite the significant findings about the positive effects of social/family contacts on reducing consumption of all the psychoactive substances that were analysed, this study differs from others in that no research was conducted on the possible effects of having active exterior contacts in reducing anxiety or stress in prison¹⁴, infractions in prison or on facilitating subsequent social rehabilitation after the sentence, unlike other research projects²².

Finally, although it was possible to observe that family is an essential element in the participants' health, future research in Spain should also focus on the consequences for families of the imprisonment of one of their members, which has been studied in international research¹⁷, and has generally shown greater emotional and/or financial deprivation for the inmate's family.

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REFERENCES

1. Drug use and responses in prison. Spain. [Internet]. En: European Monitoring Centre for Drugs and Drug Addiction. EMCDDA; 2017. Disponible en: http://www.emcdda.europa.eu/countries/drug-reports/2017/spain/drug-use-response-in-prison_en
2. Caravaca-Sánchez F, Pastor-Seller E. Sistemas y programas sanitarios dirigidos a la población privada de libertad en España. Madrid: Dykinson; 2017.
3. Dolan K, Wirtz AL, Moazen B, Ndeffo-mbah M, Galvani A, Kinner SA, et al. Global burden of HIV, viral hepatitis, and tuberculosis in prisoners and detainees. *Lancet*. 2016;388:1089-102.
4. Fazel S, Seewald K. Severe mental illness in 33,588 prisoners worldwide: systematic review and meta-regression analysis. *Br J Psychiatry*. 2012;200:364-73.
5. Rivlin A, Hawton K, Marzano L, Fazel S. Psychiatric disorders in male prisoners who made near-lethal suicide attempts: case-control study. *Br J Psychiatry*. 2010;197:313-9.
6. Chang Z, Lichtenstein P, Larsson H, Fazel S. Substance use disorders, psychiatric disorders, and mortality after release from prison: a nationwide longitudinal cohort study. *Lancet Psychiatry*. 2015;2:422-30.
7. Farrell M, Marsden J. Acute risk of drug-related death among newly released prisoners in England and Wales. *Addiction*. 2008;103:251-5.
8. European Monitoring Centre for Drugs and Drug Addiction. Treatment demand indicator (TDI). Standard protocol 3.0. Guidelines for reporting data in people entering drug treatment in European countries. [Internet]. Luxembourg: Publications Office of the European Union; 2012. Disponible en: http://www.emcdda.europa.eu/system/files/publications/675/EMCDDA-TDI-Protocol-3.0_392671.pdf
9. Fazel S, Bains P, Doll H. Substance abuse and dependence in prisoners: a systematic review. *Addiction*. 2006;101:181-91.
10. Baltieri DA. Predictors of drug use in prison among women convicted of violent crimes. *Crim Behav Ment Health*. 2014;24:113-28.
11. Fazel S, Yoon IA, Hayes AJ. Substance use disorders in prisoners: an updated systematic review and meta-regression analysis in recently incarcerated men and women. *Addiction*. 2017;112:1725-39.
12. Plan Nacional Sobre Drogas. Observatorio Español de la Droga y las Toxicomanías. Encues-

- ta sobre salud y consumo de drogas a los internados en instituciones penitenciarias. ESDIP 2016. [Internet]. Madrid: Ministerio de Sanidad, Servicios Sociales e Igualdad; 2016. Disponible en: <http://www.pnsd.mscbs.gob.es/profesionales/sistemasInformacion/sistemaInformacion/pdf/2016ESDIP.pdf>
13. Caravaca-Sánchez F, Sánchez-Alcaraz Martínez C, Osuna E, Falcón Romero M, Luna A. Implicaciones del consumo de sustancias psicoactivas sobre la salud de hombres privados de libertad. *Gac Sanit.* 2015;29:292-95.
 14. Claire KD, Dixon L. The Effects of Prison Visits From Family Members on Prisoners' Well-Being, Prison Rule Breaking, and Recidivism: A Review of Research Since 1991. *Trauma Violence Abuse.* 2017;18:185-99.
 15. Turanovic JJ, Tasca M. Inmates' Experiences with Prison Visitation. *Justice Q.* 2017:1-36.
 16. P RJ, Huilan Y. Family Contact and Recidivism: A Longitudinal Study of Adjudicated Delinquents in Residential Care. *Soc Work Res.* 2005;29:31-9.
 17. Rivlin A, Hawton K, Marzano L, Fazel S. Psychosocial Characteristics and Social Networks of Suicidal Prisoners: Towards a Model of Suicidal Behaviour in Detention. *PLoS One.* 2013;8:e68944.
 18. Pastor Seller E, Torres Torres M. El sistema penitenciario y las personas privadas de libertad en España desde una perspectiva internacional. *Polit Crim.* 2017;12:124-50.
 19. Van Wormer K. Working with female offenders: A gender-sensitive approach. Hoboken, New Jersey: Wiley; 2012.
 20. Rodríguez-Martínez A, Ruiz-Rodríguez F, Antón-Basanta JJ, Herrera-Jáimez J, Máiquez-Pérez A, Ottaviano-Castillo A. ¿Tienen apoyo social los reclusos drogodependientes? Estudio en una prisión andaluza. *Rev Esp Sanid Penit.* 2010;12:13-20.
 21. Buffel V, Colman E, Dereuddre R, Bracke P. The use of mental health care, psychotropic drugs and social services by divorced people: does informal support matter? *Eur J Soc Work.* 2015;18:262-83.
 22. La Vigne NG, Naser RL, Brooks LE, Castro JL. Examining the Effect of Incarceration and In-Prison Family Contact on Prisoners' Family Relationships. *J Contemp Crim Justice.* 2005;21:314-35.
 23. Christian J, Kennedy LW. Secondary narratives in the aftermath of crime: Defining family members' relationships with prisoners. *Punishm Soc.* 2011;13:379-402.
 24. Encuesta sobre salud y consumo de drogas en internados en instituciones penitenciarias. ESDIP 2011. [Internet]. Ministerio de Sanidad, Servicios Sociales e Igualdad; 2012. Disponible en: http://www.pnsd.mscbs.gob.es/profesionales/sistemasInformacion/sistemaInformacion/pdf/ESDIP_2011.pdf