Rev Esp Sanid Penit 2012; 14: 50-60

Description of the Psychiatric Unit in prisons in the autonomous community of Valencia

F Arnau-Peiro[1], J Garcia-Guerrero[2], A Herrero-Matias[2],
JC Castellano-Cervera[3], EJ Vera-Remartinez[2], V Jorge-Vidal[4],
S. Arques-Egea[5], C Iranzo-Tatay[6]

1 Consultant Psychiatrist of Castellon I, Castellon II and Valencia II
2 Castellon I
3 Valencia
4 Castellon II
5 Psychiatrist. Hospital La Fe. Valencia
6 Psychiatrist. Mental Health Unit (Unidad Salud Menta) Buñol (Valencia)

ABSTRACT

Introduction: Little work has been done on the contents of psychiatric consultancies in prisons.

Aims: To explore the sociodemographic, clinical and treatment profile of the patients who were assessed in the psychiatric consultancy of three prisons.

Methods: This is a prospective, longitudinal, descriptive and multicenter-based epidemiological study of patients who were assessed in the psychiatric consultancy of three prisons in the Autonomous Community of Valencia from 2009 to 2011. Sociodemographic, clinical and prison data was obtained from each patient. Their frequency was compared with Pearson's Ji2 and averages with the ANOVA test or with The Kruskall-Wallis method. The probability of keeping the patients in schedule was calculated with Kaplan-Meier's curves and differences with the Mantel-Haenzsel method (Logrank) were established. A logistic regression model was designed to determine the data linked to frequent users.

Results: 786 patients were assessed in 2,006 visits (2.5 visits/patient). 90% were male, 88.2% Spanish and their average age was 36 years. 29.9% suffered from an infectious chronic pathology. 69.5% used some kinds of substance. 59.2% suffered from personality disorder and 11.6% from the spectrum of schizophrenia. The most frequent medical profiles were: 49.1% with anxiety disorder, 20.8% depressive disorder and 11.7% psychotic disorder. These psychotic disorders meant a greater probability of 1.5 times for maintaining in schedule. The most commonly prescribed medications were quetiapine, mirtazapine, pregabalin and diazepam.

Conclusion: There is a high prevalence of mental disorders in prisons. It is necessary to improve the available resources to deal with these pathologies in the most effective way.

Key words: mental health; prisons; diagnosis; psychopathology; drugs; therapeutics; psychotropic drugs; Spain.

Text received: 04-11-2011

Text accepted: 31-03-2012

1. INTRODUCTION

Mental pathology among inmates in prisons is a severe public health issue [1]. Several European [2-5], American [6] ad Australian [7] studies have observed higher rates of mental pathology in the imprisoned population than in the general population. The Fazel meta-analysis [8] is one of the most representative examples, since it assesses 62 different studies on mental disorders in prisons and has concluded psychosis rates of 3.7% among male inmates and 4% of females, depressive disorders in about 10% of males and 12% of females and rates of 65% in males and 42% in women regarding personality disorders. In Spain there is still

scarcity of studies approaching this issue, although we can highlight the recent publication of Vicens *et al* [9] which has evaluated 707 inmates with rates of 76.2% for substance abuse disorders, 45.3% for anxiety disorders, 41% for mood disorders and 10.7% for psychotic disorders.

Several hypothesis are possible to explain this fact, ranging between causes that we could so call extra penitentiary, the concept of transinstitutionalization [10] which has taken place after the psychiatric reform, an impaired community mental health network, an increased abuse of substances [12] and intra penitentiary causes, such as the psychiatrization of life's problems [13], the psycho-pharmacological management of dysfunctional symptoms within the penitentiary environment which are not strictly caused by something psychiatric and the scarcity of psychiatry units in prisons [14], among others.

Recently Spanish prisons, in view of this situation, have initiated the Actuation Protocol of PAIEM (Comprehensive Program for Mental Health issues in Prison) whose development is based on three stages: the first is aimed at the identification of inmates with mental disorders, the second intends to establish a clinical diagnosis and initiate medical treatment, and the third consists of deriving these inmates to rehabilitation programs, by encouraging the inclusion of patients in one of the three intervention levels according to their individual clinical features and therapeutic response. In Level 1 there is a good response to treatment, in Level 2 this is a partial response and in Level 3 includes patients with a poor response to treatment.

In Spanish prisons, except in the two penitentiary psychiatric facilities located in Alicante and Seville and the psychiatric hospitalization unit in Cataluña (UHPP), the identification and treatment of inmates with mental pathology mainly lies with Primary Care medical services within the prison, which sometimes count upon the support, mostly part-time, of psychiatrists. Taking into account that psychiatric consultation is the second cause of specialized consultation, after odontology, this situation seems insufficient. Several sectors have recommended a more efficient reorganization of comprehensive care provided to inmates with mental pathology, from technicians in prisons [17], to penitentiary surveillance judges, who through their 2008 resolutions plead for the creation of psychiatric units within prisons [18].

This paper intends to describe the care activity provided in the psychiatric consultancy of three Spanish prisons: *Castellón I*, *Castellón II* in Abocacer and *Valencia II* in Picassent. More specifically we intend to describe the socio-demographic, clinical and therapeutic profile of all inmates derived to psychiatric consultation.

2. MATERIAL AND METHODS

This is a prospective, longitudinal, descriptive and multicenter-based epidemiological study of the imprisoned population evaluated in the psychiatric office of the prisons Castellón I, Castellón II and the Compliance Unit of the facility Valencia II. In each of these centers the psychiatrist received visits four times every month, and assessed between 8 and 10 inmates each time.

The study period for the prison Castellon I included 13 months (from 01/07/10 to 31/07/11), in Castellon II 14 months (from 01/06/10 to 31/07/11) and in Valencia II, 26 months (from 01/06/09 to 31/07/11).

Patients were consecutively included in the study. All patients derived by medical services to the prison psychiatric consultancy and thereby assessed during the study period were included. There are no standardized criteria for the derivation of inmates from the Primary Care services to psychiatric consultation. The main criterion is clinical and depends of the Primary Care clinician; often cases of serious mental disorders are derived (psychotic disorders and severe affective and personality disorders), as well as dual pathology and patients refractory to the treatment established in Primary Care.

The following variables were obtained and analyzed during the monitoring of each patient throughout the study period:

Socio-demographic variables: gender, age, nationality, academic achievement level, work status.

Penitentiary variables: Preventive or convicted status and sentence duration.

Offence related variables: crime type and number of previous sentences.

Clinical variables: reason for consultation, psychiatric diagnosis (including drug use) and medical comorbidity. Diagnosis takes place throughout clinical interviews with monitoring of each patient. Neither a history of mental disorder previous to imprisonment nor the utilization of mental health resources from the community have been taken into account for this study.

Frequentation variables: number of visits during the monitoring period. Hyperfrequenters were defined as all patients assessed five or more times during their monitoring period (this was chosen according

to the mean and standard deviation of the number of visits per inmate).

Pharmacological use variables: number of prescribed drugs, active principles and average dose used. In order to assess the mean prescribed dose, data on drugs and the dosage prescribed was collected only during June and July 2011 in all the three prisons.

Time variable in the study (in days): the decease of the inmate, together with transfer to other prisons, obtaining freedom, psychiatric discharge or remaining until the end of the study were the reasons for closing the study.

Variables were obtained two ways: mainly through clinical semi-structured interviews held with each patient throughout their clinical monitoring period, and secondarily, through the information collected in the clinical history of each patient. Standardized scales were not used for the analysis due to the incompatibility of such tools with the normal development of regular clinical activity. No tests were conducted to determine the use of drugs neither; the references of inmates during consultation were accepted in this subject.

The centers' average population was obtained through the arithmetic mean of inmates hosted in each center on the last day of every month included in the period under study.

A data base was created, by codifying the variables as a means of minimizing introduction errors. Only one person introduced all data. Once fulfilled, a data cleansing process was carried out by applying two techniques: range tests and the distribution of unknown or missing values through the procedure MVA (Missing Value Analysis) which has implemented version 15 of the statistical analysis software SPSS, with which the analysis has been carried out. Qualitative variables were described through absolute and relative frequencies. Quantitative measures were expressed as the mean with its corresponding 95% confidence interval and as a dispersion measure, the standard deviation. As to compare qualitative variables Pearson's chi square test was used and to compare means, the ANOVA or Kruskall-Wallis tests, for parametric or non parametric variables respectively, were used. In order to obtain potential risk factors of becoming a hyperfrequenter, a binary logistic regression model was used, by considering the fact of being or not a hyperfrequenter the dependent variable.

A survival study was carried out by means of the Kaplan-Meier method as to determine the probability of remaining in the monitoring during the study period, according to the main diagnosis established. The differences were determined by means of the Mantel-Haenszel (Logrank) test. First it was evaluated per centers, to eventually analyze the overall sample under study. A Cox regression model was also applied by taking the different established diagnosis as the prognosis variable. The significance level for the contrast of hypothesis has been 5% ($p<0.05$).

All patients were informed on the fact that data gained by means of the interviews could be used for a study of this nature and all verbally consented to this. The study received the perceptive support of the Support Unit of the Secretary General of Penitentiary Institutions for its realization.

3. RESULTS

The overall average population throughout the study period is 3,250 inmates: 714 from the facility Castellon I, 1,385 from Castellon II and 1,151 from Valencia II. 786 patients were evaluated in psychiatric units; hence 24.2% of the centers' mean population.

Out of all patients evaluated 90% were men (only in Castellon I and Valencia II are there female inmates). 88.2% were Spanish and an average age of 36.0 (ranged between 18 and 68), without statistically significant differences between genders ($p=0.75$) and the status of preventive or convicted inmate ($p=0.93$). 5.0% are illiterate and 50.9% have not completed their primary studies. Only 4.8% have secondary or higher education. There are no significant differences between genders as far as the academic level is concerned ($p=0.92$) nor between preventive and convicted inmates ($p=0.08$). 76.5% were unemployed upon their entrance in prison, this fact being more frequent among male inmates ($p=0.01$) and without differences between preventive or convicted inmates ($p=0.09$). 3.1% of the sample had been recognized some kind of mental disability.

90% were inmates with an average of 1.6 previous stays in prison (standard deviation (SD): 3.5; range 0-45) and 2,791 days as the average serving time (SD: 3,941; range 90-73,000). Female inmates presented a lower number of previous stays in prison ($p=0.02$), without any differences between genders as far as the serving time is concerned ($p=0.06$). Among convicted inmates the number of previous entries in prison was higher ($p=0.01$). Offences committed by the patients evaluated are the following: 60.3% against property, 11.0% against life, 10.6 % gender based violence, 9.9% against public health, 3.8% sexual offences, 2.1% against road safety, 0.7% against freedom and 1.6% did not report on this subject.

35.8% had been diagnosed with an associated medical disease, among which the most frequent were the infection by HCV (17.3%), the coinfection by HCV and HIV (11.3%) and HIV (1.3%). No differences regarding this subject were found between genders (p=0.38) nor between preventive and convicted inmates (p=0.14). Other features regarding the patients and their disaggregation per center are shown on Table 1.

The reason for psychiatric derivation from the Primary Care service within prison was in 44.2% of cases for anxious symptoms, in 17.2% for a depressive mood, in 11.7% for the suspicion of psychotic symptoms, in 7.8% for monitoring stable mental patients (31.6% diagnosed with a personality disorder, 44% with a psychotic disorder, 13% with a depressive disorder and 11.4% with mental retardation), in 5.9% of cases consultation was pursued to evaluate the inmate's demand of psychoactive drugs, in 5.1% to conduct a psychiatric report, 3.3% presented sleeping disorders and 1.6% were derived for monitoring of inmates included in the suicide prevention program.

Regarding the psychiatric diagnosis in DSM IV's Axis I, 49.1% of the sample presented a generalized anxiety disorder; major depressive disorder was identified in 20.8% and bipolar disorder in 1.5%. 0.4% of the sample explicitly reported a diagnosis of attention deficit hyperactivity disorder. 11.7% presented a diagnosis within the schizophrenia spectrum (14% of patients in Castellon I, 11.5% in Castellon II and 10.8% in Valencia II without significant differences between centers, p=0.54%). A higher probability of psychotic disorders was observed in male inmates

Socio-Demographic Variables		Total	Castellón I	Castellón II	Valencia II	*p*
Gender	Male	710	125	217	368	0.00[1]
	Female	76	8	–	68	
Age		35,7	35,7	35	36,6	0,70[2]
Nationality	Spanish	694	106	192	396	0,02[1]
	Foreing	92	27	25	40	
Academic level	lliterate	32	9	11	12	0,61[1]
	Primary incompleted	329	64	95	170	
	Primary	210	39	65	106	
	Secondary or Higher	73	14	26	33	
Working status	Unemployed	492	89	139	264	0,07[1]
	Active	124	29	50	45	
	Disability or similar	27	8	8	11	
Penitentiary Variables		Total	Castellón I	Castellón II	Valencia II	*p*
Estancias en prisión previas (media)		1,69	1,58	2,28	1,22	0,00[3]
Sentence duration (average days)		2710	2071	3664	2397	0,00[3]
Clinical Variables		Total	Castellón I	Castellón II	Valencia II	*p*
Associated Medical pathology	Yes	282	51	100	131	0,00[1]
	No	504	82	117	305	
Substance use	No	238	38	45	155	0,00[1]
	One	184	30	43	111	
	Two	23	6	9	8	
	Over two	341	59	120	162	

[1] Chi-square test. [2] ANOVA Test. [3] Kruskal-Wallis Test.

Table 1. Socio-demographic, clinical and penitentiary variables of inmates assessed in the Psychiatry Unit of the three prisons.

(p=0.02) without any significant difference between preventive and convicted inmates (p=0.26).

Regarding the psychiatric diagnosis in DSM IV's Axis II 59.2% of the sample fulfilled criteria for the diagnosis of personality disorder, over 90% corresponding to cluster B (borderline, antisocial, narcissistic and mixed disorders). Comorbidity in axis I was as follows: 59.3% presented a generalized anxiety disorder, 12.0% a depressive disorder and in 6.6% of cases psychotic symptoms were identified.

The diagnosis of mental retardation is explicitly reported in the clinical history of 1.9% of the sample. Such diagnosis has not been confirmed since no standardized tests to measure the intelligence quotient have been carried out.

As far as substance use is concerned, 69.5% reported some kind of abuse or dependency but whether such use was initiated before or after imprisonment was not considered for this study. Drug use was more common among male inmates (p=0.01) and no differences were observed between preventive and convicted inmates (p=0.24). The most frequent pattern of drug abuse was polytoxicomania in 43.4% of cases (define as the use of three or more drugs, including opioids in all cases), 23.4% used only one drug and 2.9% reported the use of two drugs. In such group, cocaine was used by 82.0% of patients, heroin by 79.0%, cannabis by 65.0% and alcohol by 11.8%. No data on tobacco smoking in the sample under study has been collected.

Only 12.9% of those who admitted using drugs did not have a psychiatric diagnosis in Axis I nor II of DSM IV.

Regarding the rate of patients with dual pathology [19] —defined as the coexistence of a severe mental disorder within the schizophrenia spectrum, bipolar disorder or severe personality disorder and a substance abuse or dependency disorder— this represented 17.8% of the overall sample under study.

The overall duration of psychiatric monitoring is of 208.3 days (SD: ±193; range: 1-789); 162.16 days (SD: ±135 days, range: 1-389) in Castellon I, 194.7 days (SD: ± 140 days; range 1-425) in Castellon II and 229.26 days (SD: ±224, range: 1-789) in Valencia II.

The causes for suspending the monitoring were the following: 37.8% received clinical discharge from the psychiatric unit, 15% were released, 8.8% were transferred to another facility and 0.5% deceased due to bronchoaspiration secondary to substance overdose of no suicidal nature, according to the information included in the clinical history. The rest (37.1%) was still being monitored by the psychiatry unit at the time when the study concluded.

Patients with psychotic disorders remained longer in the psychiatry unit than the rest of patients in Castellon I (log-rank: p=0.004) and Valencia II (log-rank: p=0.000), while no differences were found in Castellon II (log-rank: p=0.79) (see Figure 1). Being diagnosed of a psychotic disorder entailed that it was 1.5 times more likely (95% CI 1.1-1.9) to remain longer in the unit if compared with the rest of diagnosis (see Figure 1).

A total of 2006 consultations were conducted, at 2.5 visits per patient (SD: 2.0; range 1-15). In both prisons in Castellon with respective study periods of 13 and 14 months, the average number of visits is 2.7 (SD: 2.0; range 1-13) and in Valencia II –with a study period of 26 months- the average is of 2.4 visits per patient (SD: 1.9; range: 1-15). No significant differences have been found regarding the average number of visits per patient between genders (p=0.69) nor between preventive and convicted inmates (p=0.48). The 465 patients with personality disorders are those who generate more visits (total: 1181; average: 2.5; range: 1-15). Figure 2 shows the relationship between the number of visits and the reason for consultation or derivation from Primary Care.

There were 15 hyperfrequenters; the higher risk of hyperfrequentation is associated to the decrease of psychiatric medication during monitoring (OR: 2.954; 95%CI: 1.947-4.483; p<0.001). Other factors related to hyperfrequentation are shown on Table 2.

Pharmacological treatment was prescribed, kept or modified in accordance with the clinical evolution of each patient throughout the monitoring period. 93.4% were prescribed at least one psychoactive drug, the average being 2.6 (SD: 1.3; range: 0-7). 14.5% of patients were prescribed only one drug, 71.7% between two and four drugs and 7.2% five or more. During the study period 34.6% of patients remained on the same number of drugs initially prescribed, 34.6% had to increase the number of drugs and 30.7% decreased it. No significant differences were observed between genders as far as the number of prescribed drugs is concerned (p=0.13), although the increase of medication was more frequent among women (p=0.02). Between preventive and convicted inmates no differences were concluded as far as the number of prescribed drugs (p=0.48) nor the probability of increasing or reducing it (p=0.31) is concerned. The most prescribed drugs were: quetiapine (191 patients), mirtazapine (204), pregabalin (236) and diazepam (287), the rest of prescriptions together with their doses and number of patients prescribed are shown on Table 3.

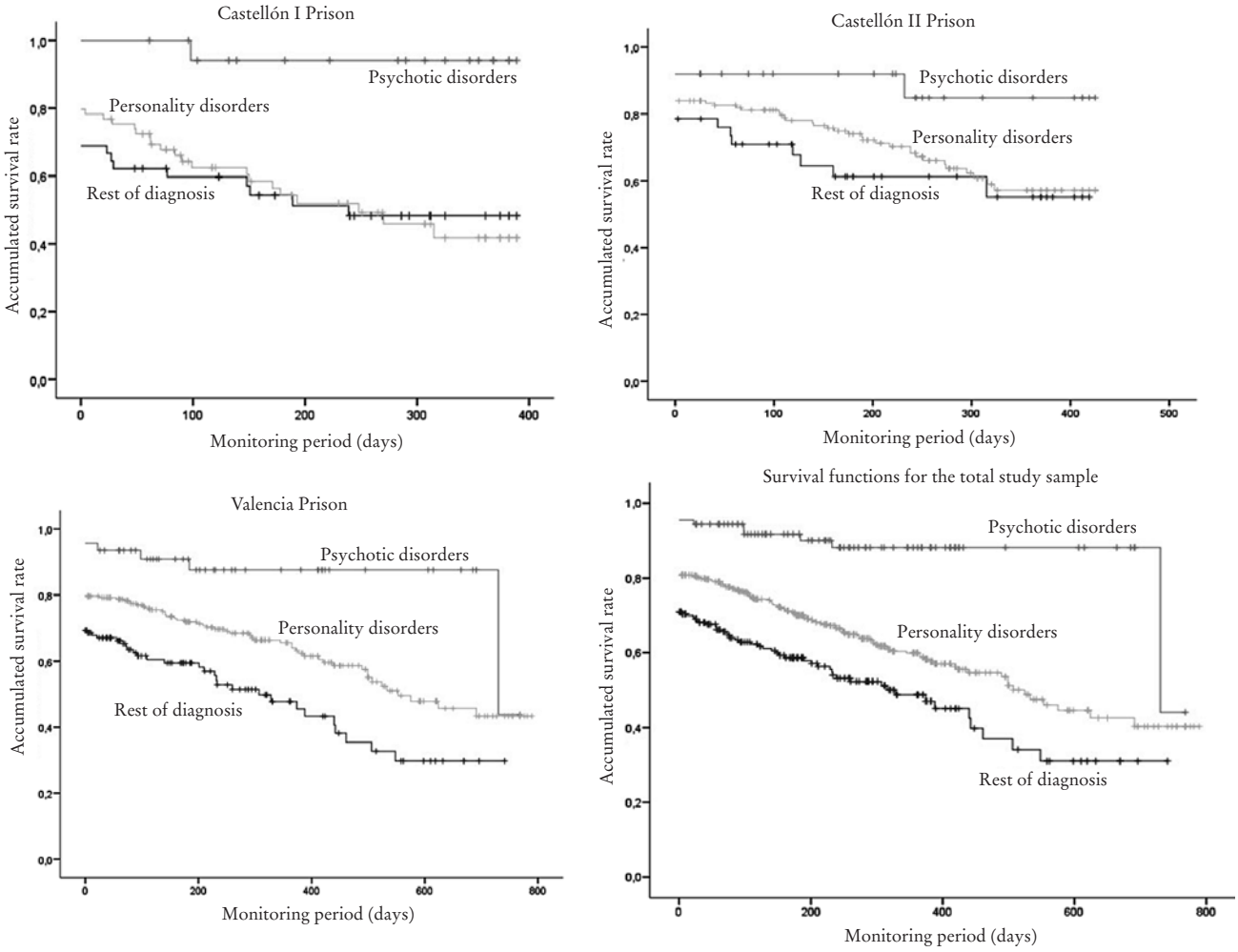


Figure 1. Kaplan-Meier analysis for the main pathologies and centers.

In Castellon I the psychiatric medication was increased after psychiatric consultation in 55% of patients, 28.9% in Castellon II and 33.6% in Valencia II ($p<0.0001$), while the reduction of such medication was more probable in Castellon II (45% in comparison with 23% in Castellon I and 24% in Valencia II; $p<0.0001$) and it remaining unmodified in Valencia II (41% in comparison with 21.7% in Castellon I and 25% in Castellon II; $p<0.0001$).

Figure 3 represents the relationship between the number of drugs and the causes for abandoning the study according with the prison. It must be noted that the higher number of psychoactive medication is provided in Castellon II although it is the facility with a higher rate in medication reduction.

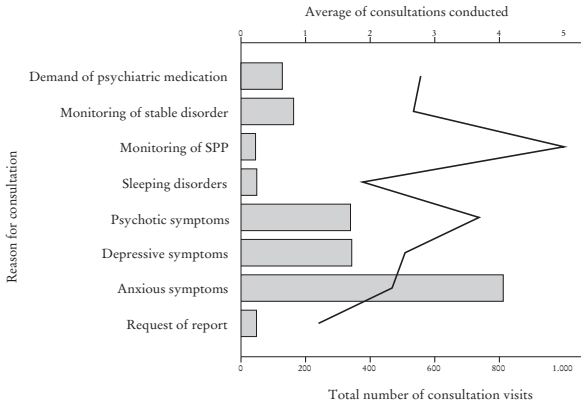
4. DISCUSSION

We have assessed the psychiatric care provided in three prisons during a long period of time; throughout such period one fourth of the average population was transferred to this unit by Primary Care clinicians within the prison. Nevertheless, this figure must not be considered a referent of the prevalence of mental pathology in prison since there can be mental patients whose monitoring is carried out by primary care clinicians, and on the other hand there can be cases unnoticed by this first care level, hence have not been derived.

Patients derived to the psychiatry unit are Spanish in a proportion which broadly exceeds that of Spanish citizens in prisons. This fact may be due to a higher rate of illegal drug abuse by the Spanish population before entering prison. Sociocultural factors can also

play a role in this phenomenon, such as the fact that the immigrant population has a better intra-group support during their stay in Spain which can contribute to minimize the appearance of metal disorders.

The proportion of illiteracy (5.0%) and unemployment (76.5%) observed in the sample is very similar to that concluded in the Psychiatric Hospital of Alicante, with illiteracy rates of 7.0% and unemployment in 71.9% of cases [21], although it must be taken into account that the population in that hospital includes patients under safety measures - a high percentage of patients with psychotic disorders.



SPP: Suicide Prevention Protocol

Figure 2: Distribution of total and average number of visits to the Psychiatry Unit and relationship with the reason for consultation or derivation during the study period.

Variable	significance	Exp (B)	95% CI for Exp (B)
Overall reduction of the number of psychoactive drugs throughout monitoring	0.000	2.954	1.947-4.483
Psychotic symptoms as reason for consultation	0.000	2.678	1.615-4.439
Over 3 psychoactive drugs prescribed during monitoring	0.000	2.587	1.719-3.894
Suicide Prevention Protocol at some point	0.009	2.245	1.221-4.125

Table 2: Factors associated to hyperfrequentation: five or more visits throughout the monitoring period.visitas durante el período de estudio.

The type of crimes committed by the inmates in our study is similar to that of the total Spanish imprisoned population: in both cases offences against property are predominant (theft and robbery) [16].

As regards the clinical diagnosis and the psychopathology identified in our study, it offers very similar figures to other publications [3, 8]. It is worth noting that the psychosis rate in our study -11.6%- is practically identical to that in the study by Vicens et al -10.7%- which assesses the prevalence of psychiatric prevalence in a sample of 707 inmates in Cataluña, Madrid and Aragon [9], although we must be cautious when comparing these populations since their selection responds to different criteria. In our case with a specialized consultation population, not the general, we could suggest that if comparing these two rates was possible we could conclude that practically all inmates with psychotic disorders are derived to mental health specialized units within prison. One of the most important challenges for today's psychiatry – personality disorders- is clearly represented in our sample: in almost 60% of the unit's patients, in accordance with other studies which have analyzed the incidence of personality disorders in prisons [22, 23].

Referred to the community, the study by Gutierrez-Fraile et al [24] assesses the prevalence of mental disorders in a representative sample of the Spanish imprisoned population who attends outpatient Psychiatry Specialized Care units, the most prevalent being the following: current major depressive episode (25.9%), recurrent major depressive episode (27.2%), depressive episode with melancholic symptoms (18.7%), generalized anxiety disorder (16.6%), panic disorder (6.8%), substance dependency excluding alcohol (2.2%), current psychotic disorder (0.9%) and antisocial personality disorder (0.3%). Despite the limitations that comparing these two populations entails, we can observe that excluding depressive disorders, the prevalence of mental disorders is much higher in our sample. On the other hand, the study by Zimmerman [25] on the prevalence of personality disorders according to DSM IV interview criteria in American outpatient mental health units, revealed a rate of 31.4%- representation of this diagnosis being 50% higher in our study.

As far as the prescription of psychiatric medication is concerned, polytherapy is the rule, as other studies on this subject reveal [26-29]. This situation, together with the structural difficulties to control good treatment adherence by inmates, entails one of

Antipsychotics	Patients treated (N, %)	Average dose	95% IC
Quetiapine	191 (24,3)	289,5	235-344
Olanzapine	106 (13,5)	15,2	11,8-18,6
Risperidone ILD	76 (9,7)	47,2	34,7-59,7
Aripripazole	40 (5,1)	12,7	9,8-15,6
Paliperidone	31 (3,9)	7,3	3,6-11
Amisulpride	18 (2,3)	762,5	363-1162
Quetiapine depot	17 (2,2)	414,2	331-497
Risperidone [1]	7 (0,9)	–	–
Fluphenazine depot [1]	7 (0,9)	–	–
Clotiapine [1]	3 (0,4)	–	–
Fluphenazine[1]	2 (0,3)	–	–
Zipresidone	2 (0,3)	–	–
Total	500 (63,6)		
Antidepressants	Patients treated (N, %)	Average dose	95% IC
Mirtazapine	204 (26)	28	26,5-29,4
Venlafaxine	63 (8)	185,4	150,2-220,5
Escitalopram	56 (7,1)	20,6	17,5-23,6
Trazodone	46 (5,9)	100	61,3-138,7
Duloxetine	28 (3,6)	75	27,2-122,7
Paroxetine	28 (3,6)	31,1	10,6-51,6
Amitriptyline [1]	23 (2,9)	–	–
Fluoxetine	20 (2,5)	28,8	20,8-37
Citalopram [1]	14 (1,8)	–	–
Bupropion [1]	4 (0.5)	–	–
Sertraline [1]	4 (0,5)	–	–
Mianserin [1]	3 (0,4)	–	–
Clompramine [1]	1 (0,1)	–	–
Total	494 (62,8)		
Antiepileptic drugs	Patients treated (N, %)	Average dose	95% IC
Pregabalin	236 (30)	366,8	300-434
Gabapentin	104 (13,2)	1392	1137-1647
Oxcarbazepine	27 (3,4)	1254	972-1536
Topiramate	24 (3,1)	257	183-331
Valproic Acid	10 (1,3)	–	–
Lithium	5 (0,6)	–	–
Lamotrigine	5 (0,6)	–	–
Zonisamide	1 (0,1)	–	–
Total	412 (52,4)		
Benzodiazepines	Patients treated (N, %)	Average dose	95% IC
Diazepam	287 (36,5)	20,7	18,7-22,8
Clonazepam	94 (12)	4,6	3,9-5,2
Clorazepate	86 (10,9)	52,620	27,6-77,6
Lorazepam [1]	23 (2,9)	–	–
Alprazolam [1]	11 (1,3)	–	–
Total	501 (63,7)		

[1] Average dosage is not reflected because during the collection period for the variable "dosage" (June and July 2011) no patients with such prescribed medication were assessed.

Table 3. Distribution of psychiatric medication prescribed in the Psychiatry Unit.

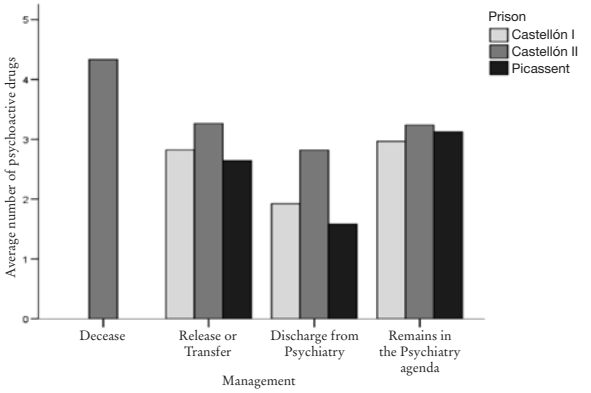


Figure 3: Average number of drugs prescribed per patient, in relation with their prison and the cause for closing the study in the psychiatry unit.

the main problems which need solving in our opinion. Therefore, reducing the number of psychiatric medication, the implementation of directly observed therapy for severe cases and exhaustive monitoring of those patients with over four prescribed drugs are currently the main priorities of medical services in the three prisons included in the study. A consequence of this is reflected in the analysis of hyperfrequenters, since one of the variables related to this fact is the reduction in the number of drugs, this is, several assessments per inmate are needed to achieve an appropriate and adjusted reduction of medication. We therefore believe that the current partial-time working activity of consultant psychiatrists in prisons is insufficient to achieve this objective.

The differences observed in the prison Castellon II in Albocacer, in comparison with the other two facilities (higher rates of reoffence, sentence duration, medical pathology associated, personality disorders and number of psychoactive drugs per inmate) in our opinion respond to its recent opening (2008), and therefore in the transfer and decongestion process from other centers, inmates with a more complex penitentiary and clinical profile may have been over represented.

The difficulty for monitoring severe psychiatric pathology in prisons must be noted. Although the average number of visits for inmates with psychotic symptoms is the highest, the monitoring of these patients is poor and insufficient, with an average of 4 visits per inmate during the monitoring year in both prisons in Castellon and an average of 3.3 visits per inmate in the two year monitoring period in Valencia II, therefore representing the patients who longer stay in the psychiatry unit. Nevertheless, this degree of monitoring for patients with psychotic disorders is utterly insufficient if quality psychiatric care wants to be provided.

In our opinion, one of the study's strong points is the lack of bias among observers, since the psychiatry unit in all the three centers is run by the same consultant psychiatrist. This is how the differences observed in the centers have to respond to other factors, such as it has been previously mentioned. We also believe that we count upon a sufficiently significant sample, with almost 800 inmates. We believe that the main limitation of our study is the fact that no psychometric tests or scales have been used to reach a clinical diagnosis although the longitudinal management of the sample with 2.5 visits per patient and 59.3% pursuing consultation over twice, contribute to mitigate such limitation and ensure sufficient monitoring to reach an individualized and reliable diagnosis. As far as the limitations are concerned, we must repeat that this is not a study on the prevalence of mental disease in prison; our purpose has been to describe the regular activity of the psychiatry unit and its results in three prisons.

Maybe future research could compare sociodemographic, clinical and therapeutic profiles of inmates with mental disorders and the rest of inmates free of disease, trying to identify factors associated to mental health in prison or even trying to compare prison psychiatric patients with patients monitored in community outpatient mental health units.

We also believe that the results of this study can contribute to the definite instauration and implementation of PAIEM15. An appropriate assistance of mental patients in prison seems inconceivable without the figure of consultant psychiatrists and impossible with a part-time activity developed by these professionals. We believe that the only way of solving this situation is that autonomous mental health services really assumed the psychiatric care provided in prisons. Only these services count upon sufficient infrastructure as to face this need; the penitentiary administration has long proved incapable of doing so. We must remember in this respect that the transfer of penitentiary health competences to autonomous communities and its eventual integration in the corresponding autonomous health services is a rule included in the 16/2003 Act of May 28th, on Cohesion and Quality of the National Health System and what is hereby being suggested would be a important step towards that direction.

CORRESPONDENCE

Dr. D. Francisco Arnau Peiro.
Consorcio Hospital Provincial de Castellon
Unidad de Media y Larga Estancia Psiquiátrica
Avenida Doctor Clara, 19
12002 Castellon
thot20240@hotmail.com.

BIBLIOGRAPHICAL REFERENCE

1. Fazel S, Baillargeon J. The health of prisoners. Lancet 2011; 377: 956-65
2. Gunn J, Madeu A, Swinton M. Treatment needs of prisoners with psychiatric disorders. BMJ 1991; 303: 338-341.
3. Fryers T, Brugha T, Grounds A, Meltzer D. Severe mental illness in prisoners. BMJ 1998; 317: 1025-6 (Editorial).
4. Brooke D, Taylor C, Gunn J, Maden A. Point of prevalence of mental disorder in unconvicted male prisoners in England and Walles. BMJ 1996; 313: 1524-7.
5. Falissard B, Loze JY, Gasquet I, Dubruc A, Debeaurepaire C, Fagnani F, Rouillon F. Prevalence of mental disorders in French prisons for men. BMJ Psychiatry 2066; 6: 33.
6. Arboleda-Florez J. Mental patients in prisons. World Psychiatry. 2009 Oct; 8 (3): 187-9.
7. Buttler T, Indig G, Allnutt S, Mamoon H. Co-occurring mental illness and substance use disorder among Australian prisoners. Drug Alcohol Rev 2011; 30: 188-94.
8. Fazel S, Danesh J. Serious mental disorder in 23000 prisoners: a systematic review of 62 surveys. Lancet 2002 Feb. 16; 359 (9306): 545-50.
9. Vicens E, Tort V, Dueñas RM, Muro A, Pérez-Arnau F, Arroyo JM et al. The prevalence of mental disorders in Spanish prisons. Crim Behav Ment Health. 2011 Dec; 21 (5): 321-32. Publicación electrónica 26 Jun 2011. doi: 10.1002/cbm.815.
10. Prins SJ. Does Transinstitutionalization Explain the Overrepresentation of People with Serious Mental Illnesses in the Criminal Justice System? Community Ment Health J. 2011 Dec; 47 (6): 716-22. Publicación electrónica 8 Jun 2011.
11. Hernández M. La psiquiatría comunitaria. En: Imágenes de la Psiquiatría Española. Asociación Mundial de Psiquiatría. Barcelona: Glosa; 2004; p. 585-602.
12. Encuesta Domiciliaria sobre Alcohol y Drogas en España 2009 [Internet]. Madrid: Ministerio de Sanidad, Servicios Sociales e Igualdad; 2010 [citado 4 oct 2011]. Disponible en: http://www.pnsd.msc.es/Categoria2/observa/estudios/home.htm.
13. Rodríguez JC. Psychiatrisation of Daily Life: a Medicated View of Human Suffering. Edufamilia Estudios [Internet]. 2011 En [citado 8 Sep 2011];1:[aprox.1p.].disponibleen:http://edufamilia-estudios.com/magazine/1/article/4/La_psiquiatrizacion_de_la_vida_cotidiana:_una_vision_medicalizada_del_sufrimiento_humano.html.
14. Pérez. E. ¿Psiquiatría penitenciaria? Rev Esp Sanid Penit 2004; 6: 97-101.
15. Protocolo de aplicación del programa marco de atención integral a enfermos mentales en centros penitenciarios (PAIEM) [Internet]. Madrid: Secretaría General de Instituciones Penitenciarias. Dirección General de Coordinación Territorial y Medio Abierto. 2009 [citado 17 Aug 2011]. Disponible en:http://www.iipp.es/web/export/sites/default/datos/descargables/descargas/Protocolo_PAIEM.pdf.
16. Informe general 2009. Secretaría General de Instituciones Penitenciarias [Internet]. Madrid: Ministerio del Interior; 2010. [citado 29 Aug 2011]. Disponible en: http://www.institucion-penitenciaria.es/web/export/sites/default/datos/descargables/publicaciones/Informe_General_2009.pdf.
17. Barrios LF. La psiquiatría penitenciaria: perspectiva histórica y problemas presentes. Madrid: Sociedad Española de Psiquiatría Legal; 2003.
18. Consejo General del Poder Judicial. Criterios de actuación, conclusiones y acuerdos aprobados por los jueces de vigilancia penitenciaria en su XVI reuniones celebradas entre 1981 y 2007. Madrid: Consejo General del Poder Judicial; 2008 [citado 18 Sep 2011]. Disponible en: http://www.derechopenitenciario.com/documents/CriteriosJVP-refundidos-enero-2008.pdf.
19. Herrero A, Rincón S, Íñigo C, Ventura M. La Patología Dual en el Ámbito Penitenciario. En: Haro G. Tratado sobre patología dual. Reintegrando la Salud Mental. Barcelona: MRA; 2010: 725-744.
20. Rincón-Moreno S, Vera-Remartínez EV, García-Guerrero J, Planelles Ramos MV. Consumo de drogas al ingreso en prisión: comparación entre población española y extranjera. Rev Esp Sanid Penit. 2008; 10: 41-8.
21. Iñigo C, Pérez-Cárceles MªD, Osuna E, Cabrero E, Luna A. Perfil clínico y delictivo de los enfermos ingresados en el Hospital Psiquiátrico Peni-

tenciario de Alicante. Rev. Esp. Sanid. Penit. 1999; 2: 25-31.
22. Rubio V, Varona J, Muro C, Valls E, Bosqued M, Granada JM, et al. Trastornos de personalidad en población penitenciaria. Actas del I Congreso Nacional de la Sociedad Española de Psiquiatría Legal; 1992 Oct 1-3; Zaragoza.
23. Arroyo JM, Ortega E. Los trastornos de personalidad en reclusos como factor de distorsión del clima social de la prisión. Rev Esp Sanid Penit. 2009; 11: 11-5.
24. Gutiérrez-Fraile M, García-Calvo C, Prieto R, Gutiérrez-Garitano I. Trastornos mentales en pacientes de atención especializada en el ámbito extrahospitalario español. Actas Esp Psiquiatr. 2011; 39 (6): 349-55.
25. Zimmerman M, Rothschild L, Chelmiski I. The Prevalence of DSM-IV Personality Disorders In Psychiatric Outpatients. Am J Psychiatry. Oct 2005; 162: 1911-18.
26. Llerena A, Cañas MA, Fresen P, del Río I. High Consumption of Psycotropic Drugs (N02, N05, N06) Among Prisoners. Pharmacoepidemiology and drug safety. 1994; vol 3 Suppl 1: S91.
27. Cañas M. Utilización de psicofármacos en centros penitenciarios. Actas del II Congreso Nacional de Sanidad Penitenciaria; 1998 Nov, Barcelona.
28. Cañas MA, Cañas J, Torre MA. Estudio de utilización de psicofármacos en el Centro Penitenciario de León. Análisis comparativo. Rev Esp Sanid Penit. 2001; 3: 106-10.
29. Algora-Donoso I, Varela-González O. Psicofármacos y gasto en la prisión de Madrid III (Valdemoro). Farm Hosp. 2008; 32: 331-8