



Mental health of female prisoners in Spain: vulnerabilities and challenges in prison environments

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Abstract

Objectives The aim of the study is to identify factors associated with the intake of psychotropic medication in prison among a sample of Spanish female prisoners.

Methods Information was collected from 1544 female prisoners in 39 prisons using a self-completed questionnaire in the presence of the researchers. The questionnaire had 60 questions. A descriptive, bivariate analysis and a logistic regression analysis were performed to calculate the ORs.

Results Our results show that 44.1% (681) were taking medication for their mental health in prison. In the logistic regression, seven variables were significantly associated with taking psychiatric medication and mental health problems: being Spanish meant a prisoner was five times more likely compared to being foreign (OR 5.31); intellectual disability was eight times more likely (OR 7.88); to have been treated for anxiety or depression was three times more likely (OR 3.32); a negative assessment of psychological health (OR 0.72) and older age (OR 1.03) were correlated; having been in solitary confinement was twice as likely (OR 2.65); and feeling unwell and self-injury meant a prisoner was almost five times more likely to be medicated (OR 4.89).

Conclusions Mental health in prison should be addressed from a therapeutic as well as a pharmacological perspective, requiring a model of intervention for mental disorders that is centred on the needs of women and not androcentric. Furthermore, the use of solitary confinement is questioned due to its negative impact on mental health. The creation of a prison environment that promotes recovery and includes gender perspective is a key component for a comprehensive mental health policy in prisons.

Keywords Female prisoners · Victimisation · Psychological distress · Psychiatric medication · Imprisonment · Gender perspective

Introduction

Mental health affects women and men differently, with various studies showing that women tend to have a poorer mental state. This cannot be explained solely by biological differences, and we must also consider the social and

cultural inequalities between men and women in society (Bacigalupe et al. 2020).

Female inmates face a prevalence of psychiatric problems and psychological distress (Caravaca-Sánchez and Wolff 2016), and show differences from male inmates, due to social expectations regarding women as mothers and caregivers that create a situation of psychological distress when they enter and remain in prison (Gómez-Figueroa and Camino-Proañó 2022). In this regard, studies have noted a high prevalence of psychological disorders and mental health issues among female prisoners: situations of anxiety, stress, anxiety, depression, post-traumatic stress are highly prevalent among female inmates (Baranyi et al. 2022).

The need for intervention in mental health in prison populations has been highlighted in various studies (Bedaso et al. 2020). The prevalence of mental health problems is

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estimated to be between 25% and 46% (Añaños-Bedriñana 2017), higher than in the general population (Fazel et al. 2016). Some studies have shown a presence of mental disorders that is almost 16 times more common than in the general population (Baranyi et al. 2022). Additionally, there is a high incidence of social stigma and its relationship with drug use. The high rates of victimisation, gender-based violence, childhood and adolescent sexual abuse trauma, and the trauma of being incarcerated, should also be noted (Scherer and Scherer 2011; Qhogwana 2022). Lastly, we should not forget the problems related to psychoactive substance or alcohol consumption (Favril 2023; Ferguson 2024), suicidal attempts and self-harm (Arriba-Ibar 2017; Alcantara-Jimenez et al. 2023), as well as mental health disorders and intellectual or psychological disability in prison populations (Fazel et al. 2017; Gate et al., 2017).

These emotional states and mental health problems lead women to require psychiatric medication to combat all types of psychological distress, as the possibility of receiving therapy as part of psychological and psychiatric care is not widely available in Spanish prisons (Añaños-Bedriñana 2017). It has been highlighted that the prescription of psychotropic drugs in prison is higher than in the general population (de Miguel 2014). Miranda et al. (2023) have pointed out that imprisonment for women leads to an increase in psychological distress that results in an increase in benzodiazepines, in part due to the scant provision of psychotherapy in prisons. These medications were already being consumed by many of them before entering prison to cope with anxiety, depression, or victimisation situations.

It has been noted that there is high psychiatric morbidity, and co-morbidity, among women prisoners who require an approach with gender perspective in mental health care (Lewis 2006; Bartlett and Hollins 2018). It has also been found that there is inadequate attention in specific and social intervention programmes for female inmates (Añaños-Bedriñana 2017).

Female inmates represent 7.4% of the prison population in Spain, and their smaller number produces greater inequality and discrimination in the penal context, given that the main recipients of prison design and care are male inmates (Quiroga-Carrillo et al. 2024). The conditions of victimisation, poverty, and inequality found in the period prior to imprisonment are not addressed during incarceration and may even be re-encountered (Nair et al. 2016).

Finally, it has been noted that the crimes committed by women are less aggressive, related to public health and less serious property crime, in most cases without violence or injury (Yague 2007; Álvarez-Pérez 2021). However, most of the literature shows that serving their sentence is harder for women than for male inmates, mainly due to the inequality, exclusion and instability that they face (Yague, 2007;

de Miguel Calvo 2014). The guilt and shame that women experience, combined with the harsher conditions in prison, lead them to a worse mental health situation, with over-medication in many cases (Galán-Casado 2024).

This study explores the relationships between social and penal conditions and mental health problems, as well as the medicalisation of these distresses. The aim of the study is to identify factors associated with the intake of psychotropic medication in prison among a sample of female prisoners in Spain.

Methods

Design and participants

An exploratory study has been carried out through a sociological survey of 1544 female inmates from 39 prisons in Spain, conducted from September 2023 to July 2024. The sample collected is representative of the entire country except Catalonia. The questionnaire consisted of 60 questions aimed at evaluating compliance with the Bangkok Rules, and some of the variables related to mental health, criminal situation, and sociodemographic factors have been used in this paper.

Procedure

The researchers, along with others who assisted with the survey, entered the women-only prisons and women's units in male prisons to administer the questionnaire that was self-completed by the inmates, with the help of the researchers. Measures were taken to ensure anonymity and confidentiality in the completion of the questionnaire. It was done on paper since electronic devices were not allowed and there was no internet available. Once completed, it was placed in an envelope that was sealed and delivered to the researchers with a commitment to open it outside the prison.

This work includes sociodemographic variables (country of birth, age, being a mother); variables prior to entering prison (recognised intellectual disability, partner abuse, sexual abuse, dependence on drugs or alcohol, in treatment with methadone or other means); intervention variables within the prison (attention for abuse, sexual abuse, drug dependence, disability, anxiety or depression, participation in addiction programmes, participation in mental health programmes); penal variables (time spent in prison, years of sentence, stay in first-degree prison, stay in isolation, type of prison [women-only or women's units in men's prisons]), have experienced a situation of risk, prevalence of abuse or neglect in situations of health); and health variables (taking mental health medication since being in prison,

psychological evaluation in the prison, from 0 to 10). Most of the variables are dichotomous categories, except for some that are interval (age, time spent in prison, years of sentence). The psychological health variable was scaled from 0 (very poor) to 10 (very good).

Once the valid and digitised questionnaires were processed, a descriptive analysis of the variables was performed. Then, since the dependent variable was taking mental health medication in prison (1=yes, 0=no), it was crossed with the rest of the variables. For categorical variables, contingency tables were used with the chi-squared statistic. For interval variables, mean comparisons were made using Student's t-test. The significant variables entered a binary logistic regression model to evaluate the significantly related variables and to calculate the adjusted odds ratios (OR). The model's goodness of fit and the multicollinearity of the variables were checked: the VIF values were 1, except for three variables where a value of 2 was obtained (prison time, drug abuse, treated for addiction). The SPSS 29 statistical package was used.

Results

Of the sample, 96.2% (1486) identified themselves as women, 1.4% (22) as transgender, and 2.3% (36) did not respond. The average age was 42.7 years (SD=11.14), with an interval of 19 to 84 years (10.2% or 158 people did not respond to this question). The majority, 69.8% (1078), were born in Spain, while 27.4% (423) were born outside the country and 2.8% did not respond. At the time of the survey, 44.1% (681) took medication for their mental health in prison, compared to 48.2% (744) who did not take it (7.7% did not respond). Since this is the dependent variable indicating problems related to mental health, the relationship between this variable and the rest of the variables studied was significant, except for the variables "there are drugs consumed in my unit", "there is pill trafficking in my unit", and "type of prison" (women-only prison or women's units in men's prisons). The descriptive and bivariate results are presented in Table 1.

In the logistic regression analysis, seven variables are significant for taking psychiatric medication (Table 1): being Spanish has a 5-fold higher probability of taking medication compared to being foreign in prison (OR=5.31); having an intellectual disability before entering prison shows a 8-fold higher risk of being medicated (OR=7.88); to have been treated for anxiety or depression in prison means a prisoner is three times more likely to take mental health medication

Table 1 Takes psychiatric medication (TPM) in prison

Variables	Total %/n	TPM %/n	No TPM %/n	OR	Interval
Age (μ/σ) **	42,7 / 11,1	43,9 /	41,5 /	1,03*	1,00–1,06
Spanish**	69,8 (1078)	81,4 (542)	62,8 (459)	5,31**	2,28–12,32
Other	27,4 (423)	18,6 (124)	37,2 (272)		
First time in prison **	60,7 (937)	54,2 (366)	69,0 (507)	1,08	0,58–2,02
Intellectual disability**	12,2 (189)	21,2 (140)	5,1 (37)	7,88*	1,95–31,72
Partner abuse**	36,4 (562)	49,1 (319)	30,7 (214)	1,16	0,59–2,30
Sexual Abuse**	22,3 (345)	32,3 (210)	16,5 (115)	1,56	0,70–3,46
Drugs abuse**	38,7 (598)	53,4 (347)	31,1 (217)	1,80	0,77–4,21
Attended by Mistreatment*	11,7 (180)	16,1 (101)	10,6 (69)	1,05 0,95	0,39–2,83 0,26–3,54
Sexual Abuse*	6,2 (95)	9,1 (57)	4,8 (31)	1,05	0,40–2,74
Addiction**				0,84	0,25–2,81
Disability**	28,9 (446)	43,9 (275)	22,4 (146)	3,32**	1,81–6,05
Anxiety/depression**	7,4 (114)	13,6 (85)	3,5 (23)		
	35,9 (554)	57,8 (363)	24,2 (158)		
Psychological Health (μ/σ)**	5,9 / 3	4,7 / 2,8	7,0 / 2,7	0,72**	0,64–0,81
Has participated Addiction Program**	20,0 (309)	26,7 (174)	16,1 (115)	0,58 2,16	0,25–1,35 0,81–5,74
Mental Health Program**	9,1 (141)	14,4 (94)	5,8 (41)		
Have children*	76,9 (1188)	81,4 (547)	76,0 (558)	0,81	0,36–1,81
Stayed in first Grade** (Closed regime)	13,2 (204)	17,6 (114)	11,4 (80)	0,55	0,20–1,52
Stayed in isolation**	24,7 (381)	35,5 (233)	17,7 (126)	2,65*	1,26–5,59
Have experienced a situation of risk **	46,0 (710)	59,6 (388)	40,8 (292)	0,81	0,43–1,53
In drug abuse treat- ment **	16,0 (247)	25,2 (164)	11,0 (76)	1,04	0,44–2,43
Prison Time (μ/σ)*	3,7 / 3,4	3,9 / 3,4	3,4 / 3,2	0,98	0,87–1,12
Years of sentence (μ/σ)*	5,9 / 5,9	5,6 / 5,3	6,3 / 6,4	1,02	0,95–1,09
Feeling unwell and self-injury **	9,8 (152)	18,0 (107)	6,5 (42)	4,89*	1,56–15,31
I'm in a conflict mod- ule **	32,6 (504)	46,6 (274)	33,4 (217)	1,26	0,67–2,36
Non-significant variables and not included in the regression					
All-women prisons	14,1 (218)	13,5 (92)	14,7 (109)		

Table 1 (continued)

Variables	Total %/n	TPM %/n	No TPM %/n	OR	Intervalo
Drugs consumed in module	46,4 (714)	55,9 (338)	54,8 (361)		
Pill Trafficking in module	48,3 (745)	60,5 (362)	57,0 (366)		

** $P=0,001$, * $P=0,05$ (μ =Mean and SD=Standard Deviation), Hosmer and Lemeshow ($\chi^2=4,491$; $p=0,810$)

(OR=3.32). A negative psychological well-being assessment is related to taking medication, and older age also increases the likelihood of taking medication. Additionally, having been isolated shows a two-fold higher probability of taking medication (OR=2.65), and if feeling unwell and self-injury, there are almost five times more chances of being medicated (OR=4.89).

Discussion

This study contributes to highlighting the prevalence and need for addressing mental health disorders in the prison environment, especially among women prisoners. Like other studies, this work shows the high prevalence of psychological distress and mental health problems among female inmates (Gómez-Figueroa 2022), as 44% were taking psychiatric medication for these conditions – slightly lower than in other studies (Miranda Seixas et al. 2023; Eck et al. 2025). Yet only 9.1% of the incarcerated women reported being part of a mental health programme in prison.

It is also evident that a high proportion of women in prisons have psychiatric disorders along with related substance-use disorders, which is highlighted in other studies (Caravaca-Sánchez and Wolff 2016; Galán-Casado 2024). In this research, some variables indicate that almost 40% had a substance addiction before entering prison, and around a third have been treated for their addiction or are in a treatment programme in prison. Therefore, the results are consistent with other studies, showing an association between mental health disorders and problematic use of psychoactive substances.

Almost all the variables that were significantly related to taking medication for mental health disorders emerged in the logistic regression analysis. First, two sociodemographic variables stood out: older age and being a native Spanish speaker compared to foreign-born women. In general, foreign-born women come from Latin America and the vast majority do not have problems with drug dependence or problematic drug use (Ruiz-García and Castilla-Algarra 2014), and they are also younger than native-born Spaniards. These two characteristics could explain the higher

relationship found, where Spanish women have almost five times the probability of being in treatment for mental health medications compared to foreign-born women. In addition, the migrant population in Spain enjoys good health (Solé-Auró et al., 2025), and it is the grief of migration that causes them psychological distress, especially in the early stages.

However, it was observed that in older adults, mental health may be more deteriorated. In this sense, mood and anxiety disorders are more prevalent in older adults with poor physical health, and the association with other stressors such as decreased social support, increased isolation, financial problems, losses, and grief (Choi and DiNitto 2013). Chronic diseases like diabetes and hypertension, which are more prevalent among older adults, have been linked to depression and anxiety (Zhang et al. 2018). These factors may be influencing the sample of incarcerated women analysed.

Secondly, taking medication for mental health is related to intellectual disability, which in this study accounts for 12.2% of the sample, higher than other studies that reported figures ranging from 3.7% (Tort Herrado 2016) to 9% (Dias et al. 2013), or between 2% and 10% (Martí-Agustí 2019). However, these estimates are primarily focused on male inmates and use various terms to refer to intellectual disability. The coexistence of intellectual disability with mental health disorders has been referenced in several studies (Tort 2016; Dias et al. 2013; Martí-Agustí et al. 2019), and the need for special attention for these inmates is recognised, although there is a scarcity of studies that focus specifically on women. Many of the crimes committed by people with intellectual disabilities, as in the case of women, are committed by third parties who take advantage of these individuals. In Spain, accomplices are punished as severely as the perpetrators. Furthermore, Spanish prisons are not adapted to meet the needs of people with disabilities, which can lead to anxiety or depression. The prison population with intellectual disability is considered a vulnerable group (Fazel 2016) that should be properly diagnosed upon entering prison and receive care tailored to their specific needs.

Thirdly, as expected, have been treated for depression or anxiety makes it three times more likely to be in treatment with mental health medication, and there is a significant relationship with low self-reported psychological well-being, with higher ratings among women who were not taking medication. These data are consistent with previous studies (Añaños-Bedriñana 2017; Miranda Seixas 2023).

Fourthly, our results show a significant association between having been in isolation in prison and being 2.6 times more likely to be in treatment with mental health medication. Prison isolation consists of being in a cell, also known as a punishment cell, for around 22 h, with only 2 h of outdoor time in the yard, without contact with anyone

except for prison guards. According to Spanish prison regulations, this type of isolation cannot exceed 14 days, with an additional 7-day extension possible. The impact of this type of punishment has been referenced in various studies and denounced by the European Committee for the Prevention of Torture (CPT) in its 2017 and 2021 reports. It is not surprising that isolation causes or aggravates psychological distress or serious mental health problems. Spanish prison legislation states that in cases of serious mental health issues, conditions of isolation should not be implemented, but this is not always followed.

The consequences for mental health of prison isolation have been reported in some studies (Zhong et al. 2021; Rios Martin 2024; Stroppa 2024). It has been noted that this type of punishment increases the risk of developing hypertension, depression, anxiety, loss of identity, post-traumatic stress disorder, and a higher risk of self-harm and suicide.

Finally, prisoners taking medication for mental health are almost five times more likely to attempt self-harm, with higher rates among female inmates (Arribas-Ibar 2017). Self-harm or suicide are recurring issues in prisons that may be linked to mental health problems exacerbated by prison conditions, or as a way to seek attention. It has been observed that imprisoned women have greater probabilities of engaging in self-harming behaviours than men in prison (Arribas-Ibar 2017; Alcántara-Jiménez et al. 2023).

Women in prison receive less attention for their mental health problems and disorders compared to men. The differences between the prevalence and attention given to mental health issues in this study compared to those conducted in other countries may be due to different prison policies, the need to provide effective mental health programmes, and the implementation of, and sensitivity towards, a gender perspective.

Limitations

Since the study's objective is broader than just mental health issues, it has not been possible to delve deeper or include scales that would allow for a more precise diagnosis of mental-health status and mental disorders. This is due to the sociological design of the study. While we did ask the participants whether they took medication for their mental health problems, we did not ask about the type of medication or the dosage, as many inmates are unaware of these details. However, this fact produces a lack of precision in the study. As it is a cross-sectional study, it is not possible to evaluate the effects of imprisonment on mental health. We only have the information provided by the inmates, which may be overestimated or underestimated. The sample is very large, but it is not representative, so the results must be extrapolated with caution, especially since transgender

women are not well represented due to their small number. Finally, the regression model shows a significant association between the variable *takes psychiatric medication* and *having an intellectual disability*, but this should be interpreted with caution. The confidence interval estimate, whilst not invalidating the result, may indicate that the estimate is imprecise.

This work highlights the need for a therapeutic and pharmacological approach to mental health in prison, and for further study of mental disorders among the prison population and specifically among female inmates.

Lastly, the penal system was designed primarily for men, with mental health care models designed for male inmates without considering the needs of the female population (Baranyi et al. 2022; Nair et al. 2016). Therefore, it is necessary to conduct a larger study on female prisoners in order to develop interventions for this population.

Implications for practice and/or policy

The vast majority of women who end up in prison come from situations of poverty, victimisation and violence that lead to poor mental health. Prisons must incorporate mental health care and specialised units for the recovery of these women as a key focus. Prison can be a place of punishment, as in centuries past, but it can also be a place of recovery and rehabilitation. Moreover, the rehabilitation of female prisoners requires interventions that adopt a gender perspective in order to be effective and to avoid wasting prison resources. The creation of a prison environment that promotes recovery is a key component of a comprehensive mental health policy in prisons.

Conclusion

The lack of attention to mental disorders and substance abuse during the process of imprisonment could have a negative effect on the reintegration of this population, as these situations increase the probability of recidivism after completing their sentence, given that this population profile has a higher risk of becoming involved in crimes and conflicts with the justice system (Quiroga-Carillo et al. 2024).

Certain interventions, such as isolation, should be reviewed, as the impact on mental health over time has been demonstrated in various studies. It is considered a cruel and inhumane practice and a serious violation of fundamental human rights (APDHA, 2020).

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Data availability No datasets were generated or analysed during the current study.

Declarations

Ethical requirements This research was approved by the Ethics Committee of the Universidad Pontificia Comillas de Madrid on 11 May 2022, n°2022/40

Ethical approval In accordance with the Declaration of Helsinki and the criteria of rigour and quality in ASA sociological research, All ethical principles and standards of social and health research have been followed.

Informed consent to participate All participants in the study gave their consent to participate.

Competing interests The authors declare no competing interests.

Clinical trial number Not applicable.

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