

Assessment of the Health Status of Women in Prison: A Comparison between Drug Users versus Non-users

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Abstract

This study aims to analyze the history of substances use, clinical diagnoses, contacts with healthcare, and health complaints. Also, it aims to compare the health status of substance users versus non-users. Health records of 93 detained women from a prison in northern Portugal, with a mean age of 38.02 years old, were reviewed and coded using both International Classification of Primary Care—2 and International Classification of Diseases—10th. Data revealed high percentages of detainees with a history of substance use and pre-existing clinical diagnosis. During the first month of imprisonment, on average, participants had complained to a health professional 14.63 times. Substance users were younger and presented more mental health problems and health complaints. Health policies and professional practices in prison must include immediate assessment of a woman's health concerns and foster the development of efficient protocols to address those problems, especially substance use disorder treatment.

Keywords

detained women, health records, substance use, clinical diagnosis, prison health care, health complaints

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In Portugal, despite the increase verified in the last decades, women continue to represent the minority of detainees (Matos et al., 2017). According to data presented by the Directorate-General for Reinsertion and Prison Services (DGRPS, 2021b), in 2020, 11,412 people complied with custodial measures, of which 7% were female, being on higher numbers between 30 and 39 years of age ($n=224$). Of the women sentenced to effective prison terms ($n=587$), the greatest number of crimes committed are related to narcotics ($n=215$), specifically the crime of trafficking ($n=193$; Direção-Geral de Reinserção e Serviços Prisionais [DGRPS], 2021a).

Over the last few years, conditions in Portuguese prisons have improved considerably, in line with European guidelines and recommendations (e.g., Council of Europe Convention on preventing and combating violence against women and domestic violence) concerning the human rights of female prisoners (Matos et al., 2017). Hence, women prisoners in Portugal have access to adequate health care conditions that specifically respond to their needs. The Portuguese law (Law 115/2009 of 12 October) states that a prisoner has the right to access the National Health Services in conditions identical to those guaranteed to all citizens (Matos et al., 2017).

Detained women frequently enter prison facilities with poor health status (Maruschak et al., 2015) pronounced by poly-morbidity, which includes substance abuse, mental illness, and infectious diseases as the most common health problems (Fazel & Baillargeon, 2010; Moschetti et al., 2015). This vulnerable condition is thought to be the result of a function of vulnerability factors with a negative impact on health and the limited access to the healthcare system previous to imprisonment (Mignon, 2016; Moschetti et al., 2015). Therefore, these women require a massive and holistic intervention of the prison healthcare services (Rutherford & Duggan, 2009).

The prison context has been identified as a set of both motivation and opportunity where this population with high health necessities should access health care similar to those available in the community (Abbott et al., 2016; Kouyoumdjian et al., 2015; Wolff et al., 2011). Although this assumption varies widely across different countries and prison establishments (Wilper et al., 2009), many studies concluded that the prison environment acts as a health promoter for specific populations (Alves et al., 2016; Butler et al., 2004; Clarke et al., 2006; Fazel et al., 2006; Plugge et al., 2011). Regarding the use of clinical services, Feron et al. (2005) showed that inmates resorted to the clinical services frequently when compared to the general population and concluded that the prison context allows access to an effective clinical evaluation and treatment addressed to the specific needs of the inmates.

On the other hand, substance abuse is a crucial and common problem in prisons and has been the main topic of numerous studies, though its estimated prevalence varies widely. According to a systematic review on substance abuse and dependence in prisoners, 10% to 24% of female prisoners presented alcohol abuse and dependence, while 30% to 60% revealed drug abuse and dependence (Fazel et al., 2006). Studies concerning detained women have estimated a high prevalence of substance abuse (Abbott et al., 2016; Eytan et al., 2011; Fazel et al., 2006; Moschetti et al., 2015; Staton et al., 2003; Wolff et al., 2011). Research has demonstrated that detained women were more often found to have drug addictions than women from the general population and

incarcerated men (Binswanger et al., 2010; Fazel et al., 2006; Moschetti et al., 2015; Staton et al., 2003). Women with substance abuse issues represent an additional challenge for prison healthcare services because of their even higher prevalence of health problems (Staton et al., 2003) and the need for specialized treatment for drug addiction (Fazel et al., 2006; Staton et al., 2003).

Considering that the use of illicit substances increases the health needs of detainees, the present study takes this assumption into account and aims to describe the pre-existing clinical diagnosis, use of primary healthcare services, and health complaints of detained women since admission to the first month of imprisonment, comparing the two groups of women with and without a history of illicit substance use before imprisonment. These analyses will allow us to understand the specific health needs of this population, which can support the design of more accurate interventions to improve the health of detained women, thus facilitating their adaptation to prison and subsequent social inclusion. Furthermore, it emphasizes the importance of the role played by health professionals in monitoring and supporting these women, leaving clues for the reinforcement of public and institutional policies.

Methods

Participants

In 2012, a total of 696 women served their sentences in the Portuguese penitentiary system, corresponding to 5.5% of the total prisoner population (Walmsley, 2012). This study took place in a female prison in the north of Portugal conceived to receive 354 women with an occupation rate of 79% at the moment of this study (General Directorate of Reinsertion and Prison Services, 2012).

In this prison, we analyzed 100 women's health records that had participated in a previous study to characterize the general health status of female inmates (authors). From the total of 100 health records examined, only 93 health records provided complete information and were included in this study.

Our sample of detained women presented a mean age of 38.02 years old, between 18 and 68 ($SD=10.78$). Overall, 68 women were white (73.1%), 20 (21.5%) were gypsies, and five (5.4%) were from another ethnic group. Regarding women inmates' juridical situation, the most common reason for the detention was drug trafficking ($n=52$; 55.9%), followed by theft ($n=9$; 9.7%), robbery ($n=7$; 7.5%), homicide ($n=6$, 6.5%), other crimes against property ($n=6$, 6.5%), rape ($n=1$; 1.1%), other crimes against people ($n=1$; 1.1%). In 11 (11.9%) of the cases the crime was classified only as "other crimes." A total of 68 (73.1%) women were serving sentences, whereas 25 (26.9%) were in pre-trial. The mean sentence length was 85.50 months ($SD=56.90$; with a minimum of 16 months and a maximum of 324 months).

Materials and Procedures

Prison's health services include nurses, a general practitioner, a psychiatrist, a gynecologist, an infectologist, a psychologist, and a dentist. This healthcare facility

operates 24h/day with a nurse present at all times. Immediately after admission, all new detainees are submitted to a triage process by a primary healthcare nurse (within the first 24 hours) and by a general practitioner (GP) (within the first 72 hours) to identify any possible health problem.

Following a preliminary examination of the available information on health records, we developed a grid, which allowed access to the relevant information according to the objectives of the study. Information from the first month of imprisonment was reviewed and coded using the International Classification of Primary Care, second edition (ICPC-2). Exceptionally, the disorders due to psychoactive substance use and nonorganic sleep disorders were coded using the International Classification of Diseases—tenth (ICD 10).

The study obtained ethical approval from the ethics committees of the General Directorate of Portuguese Prison Services. The researchers that conducted data collection safeguarded the professional secrecy, ensuring the full confidentiality of data. Data collection was carried out by two researchers at the prison's clinic (researchers were independent of the prison health service). Coding doubts were discussed during regular meetings with the research team. Records with incomplete information about the variables in the study were excluded (i.e., from the 100 health records examined, only 93 were included in the study).

This cross-sectional study assessed the female detainees' health status in the first month of imprisonment through the analysis of health records (nurse evaluation forms and medical files). Health record reviews are a common method for studying healthcare delivery and patient outcomes while providing a platform for quality improvement (Coory et al., 2009; Wai et al., 2012). Each health record contains information on personal data (i.e., height, weight, body mass index, and level of pain); relevant notifications (i.e., infectious diseases, chronic diseases, physical disability, pregnancy, current diagnostic, and addictive behaviors); pathologies that women bring to the prison; therapeutic scheme; and a history of the use of the healthcare services (i.e., information on all visits to health services, health complaints, and diagnoses). In this paper we were interested in studying demographic variables, legal status (pre-trial or sentenced), variables related to the period prior to imprisonment (e.g., licit and illicit substance use, pre-existing clinical diagnosis for physical or mental illness), and variables related to the first month of imprisonment (e.g., treatment for substance abuse, the need of hospitalization, number of visits to different medical services, as well as the number and diversity of health complaints).

Data Analysis

Data analysis included descriptive statistics to characterize detained women's demographic and legal characteristics. Chi-square and Mann-Whitney tests were used to explore differences between the two groups: substance users and non-users before imprisonment. Statistical analysis was developed with IBM Statistics SPSS Version 20.

Results

Substances Use before Prison

Regarding licit substances use, 58 (62.4%) women were smokers, and 15 (16.1%) presented problems regarding alcohol use. As for illegal substance use, 40 (43.0%) participants reported having used illicit drugs prior to imprisonment. Urine and blood tests revealed that 20 (21.5%) participants had consumed cocaine, 18 (19.4%) had consumed cannabis, and 17 (18.3%) had consumed opiate in the days before imprisonment. The use of methadone, benzodiazepines, and amphetamines in the days before imprisonment was not found.

Pre-existing Clinical Diagnosis

The triage evaluation carried out by a primary healthcare nurse revealed that 83 (89.2%) participants self-reported pre-existing clinical diagnoses (physical, mental, or both). The mean of pre-existing clinical diagnosis per detained woman was 1.88 ($SD=1.26$), where the mean of diagnosis for physical illness was 1.16 ($SD=1.12$) and the mean of diagnosis for mental illness was 0.72 ($SD=0.68$). Endocrine, metabolic, and nutritional diseases had the largest expression of the diagnosis of physical illness; whereas behavioral disorder due to psychoactive substance use was the most prevalent mental illness (Table 1).

Contact with Prison Health Services

During the first month of imprisonment, 22 (23.7%) women had to be hospitalized within prison healthcare services. Three (3.2%) women needed specific treatment regarding their alcohol and 14 (15.1%) drug addiction.

On average, each woman visited the healthcare services 13.30 times ($SD=12.53$). The majority of visits were to primary care nurses ($M=10.41$; $SD=11.72$), followed by the visits to the GP ($M=1.37$; $SD=0.99$), dentist ($M=0.59$; $SD=0.91$), psychologist ($M=0.39$; $SD=0.79$), psychiatrist ($M=0.32$; $SD=0.59$), gynecologist ($M=0.19$; $SD=0.47$), and other specialists ($M=.02$; $SD=.15$).

Health Complaints

During the first month of imprisonment, on average, participants had complained to a health professional 14.63 ($SD=15.20$) times. As for the diversity of health complaints according to ICPC-2, each woman presented 6.45 ($SD=4.88$) complaints from different sources. The majority of complaints concerned somatic health complaints, with a mean of 4.24 ($SD=3.42$), followed by a mean of 1.82 mental health complaints ($SD=1.64$). Finally, the mean of non-specific health complaints was .42 ($SD=.79$). The diversity of health complaints is shown in Table 2.

Table 1. Frequencies of Pre-existing Clinical Diagnosis, According ICPC-2 and ICD-10 (N=93).

	n	%
Physical diagnosis		
Endocrine, metabolic, nutritional diseases	23	24.7
Disease of respiratory system	19	20.4
Disease of circulatory system	18	19.4
Disease of digestive system	10	10.8
Disease of genital system	10	10.8
Blood/immune diseases	9	9.7
Disease of musculoskeletal system	7	7.5
Disease of nervous system	5	5.4
Disease of urological system	3	3.2
Skin problems	2	2.2
Ear diseases	2	2.2
Mental diagnosis		
Mental illness as behavioral disorder due to psychoactive substance use	33	35.5
Depression	19	20.4
Anxiety disorders	11	11.8
Personality disorders	2	2.2
Schizophrenia	1	1.1

Relation between Mental Health Diagnosis and Health Complaints

Pre-existing mental health diagnosis correlated positively with somatic complaints in the first month, $r = .22$, $p < .05$, and with mental health complaints in the first month, $r = .36$, $p < .001$. In addition, physical complaints and emotional complaints during the first month positively correlated with each other, $r = .47$, $p < .001$.

Differences between Illicit Substance Users and Non-users Prior to Imprisonment

Considering the socio-demographic variables, the group of illicit substances users ($M = 35.03$; $SD = 9.83$) were significantly younger ($U = 735.00$; $p = .012$) than the group of non-users ($M = 40.28$, $SD = 10.99$). No significant differences between these two groups were found with regard to ethnicity ($X^2_{(1)} = .37$; $p = .95$) or legal status ($X^2_{(1)} = .13$; $p = .72$).

Regarding their health condition before prison, the majority of users ($n = 38$) and non-users ($n = 44$) had at least one pre-existing clinical diagnosis, and no significant differences were found between the groups in respect of this variable ($X^2_{(1)} = 2.42$; $p = .12$). Considering the number of pre-existing clinical diagnoses, users had a mean of 2.10 ($SD = 1.13$) and non-users had a mean of 1.72 ($SD = 1.34$), with partially

Table 2. Frequencies of Diversity of Health Complaints, According to ICPC-2 (N=93).

Diversity of health complaint	n	%
N: Neurological	56	60.2
D: Digestive	55	59.1
L: Musculoskeletal	43	46.2
R: Respiratory	30	32.3
X: Female genital	20	21.5
S: Skin	13	14.0
T: Endocrine/metabolic and nutritional	11	11.8
K: Cardiovascular—circulatory	10	10.8
H: Ear	10	10.8
F: Eye	7	7.5
U: Urological	4	4.3
P: Psychological—feeling anxious, nervous/tense	54	58.1
P: Psychological—sleep disturbance	49	52.7
P: Psychological—feeling depressed	27	29.0
P: Psychological—drug misuse	10	10.8
P: Psychological—irritability/anger	10	10.8
P: Psychological—response to stress	4	4.3
P: Psychological—limited function/disability	2	2.2

significant differences ($U=837.50$; $p=.07$). The average number of diagnosis of physical illness of users was 0.98 ($SD=0.89$) and of non-users was 1.30 ($SD=1.34$) with no differences between the groups ($U=928.50$; $p=.29$). In contrast, female substance users had a mean of diagnoses of mental illness of 1.13 ($SD=0.65$) and non-users a mean of 0.42 ($SD=0.54$), and the difference between the means of the two groups was statistically significant ($U=480.50$, $p < .001$).

Considering each pre-existing clinical diagnosis, mental illness as a behavioral disorder due to psychoactive substance use ($n=33$) was the diagnosis significantly more prevalent in the group of users ($X^2_{(1)}=60.76$, $p < .001$). The need for hospitalization in the first month of imprisonment was also significantly different between the women with and without prior illicit substance use ($X^2_{(1)}=13.80$, $p < .001$). In the group of 22 women who needed this health service, 17 had used illicit substances before imprisonment.

Table 3 shows the variables related to health visits and health complaints in the first month of imprisonment that significantly differentiate the two groups of participants.

Discussion

This study aimed to describe the pre-existing clinical diagnosis, use of primary health-care services, and health complaints of detained women since admission to the first month of imprisonment. Moreover, the differences between women substance users and non-users before imprisonment are explored.

Table 3. Differences Between Women With and Without Illicit Substance Use Before Imprisonment (N=93).

	Yes (n = 40)	No (n = 53)	U
	OM	OM	
Health visits	55.55	40.55	718.00**
Visits to primary care nurses	55.99	40.22	700.50**
Visits to psychiatrist	56.59	39.76	676.50***
Health complaints	56.30	39.98	688.00**
Diversity of health complaints	57.34	39.20	646.50***
Physical health complaints	56.90	39.53	664.00**
Mental health complaints	56.43	39.89	683.00**
	N (%)	N (%)	$\chi^2_{(1)}$
Digestive complaints	31 (56.4)	24 (43.6)	9.79**
Musculoskeletal complaints	24 (55.8)	19 (44.2)	5.35*
Respiratory complaints	19 (63.3)	11 (36.7)	7.46**
Feeling anxious, nervous/tense	30 (55.6)	24 (44.4)	8.27**

Note. n.s. = not significant (at 5% level).

* $p < .05$. ** $p < .01$. *** $p < .001$.

Like the data reported by the World Health Organization (2009) our findings show that women enter prison facilities with a deteriorated health condition (i.e., around 90% of our sample reported a pre-existing clinical diagnosis), as well as a high consumption rate. Concerning licit substances, around three out of five detainees were smokers at the time of entry into prison. Literature tells us that smoking is one important factor contributing to the poor physical health of detained women (Harner & Riley, 2013) and one of the causes of mortality in prison (Binswanger et al., 2014). However, banning smoking without intervention to help detainees quit smoking could be an unsuccessful health action once many could restart smoking after their release (Harner & Riley, 2013). Therefore, access to smoking cessation support among detainees is an emergent issue of health promotion inside prisons. Turan and Turan (2016) found that banning smoking does not seem to be a solution to prevent tobacco use in prisons, with cost-free smoking cessation programs being a more viable option. Furthermore, female detainees' alcohol use has not been considered a key topic for prison health policy and researchers. Fazel et al. (2006) found, in their systematic review, five studies that measured alcohol abuse in detained women and revealed that the estimated prevalence of this behavior ranged from 10% to 23.9%, marking a clear difference with the general population. However, MacAskill et al. (2011) highlighted the disparity between the high levels of female alcoholics and low levels of treatment in prison. This disparity was also verified in our study, where problematic alcohol use was reported by one-sixth of women, whereas only a small part of them had a specific treatment for alcohol dependence. Considering this data and the importance of

identifying offenders with alcohol problems to provide high-quality healthcare (MacAskill et al., 2011), alcohol dependence and respective treatment should become a target in future research and be considered more seriously in prison health policies, ending the underdevelopment of treatment for alcohol problems in prison (Ginn & Robinson, 2013).

Regarding illicit substance use, there was a relevant heterogeneity among studies about the prevalence of drug abuse in female offenders. Fazel et al. (2006) estimated a prevalence ranging from 30.3% to 60.4% of drug abuse/dependence in female prisoners. In the Portuguese context, the use of illicit drugs before imprisonment was found in 45.1% of detained women (Mendes et al., 2016). The findings of this study meet these results since two out of five of the participants were users of illicit substances before imprisonment. The urine and blood tests revealed that the most consumed illicit substances in the days prior to the incarceration were cocaine, cannabis, and opiates. These results are comparable to those found by Staton et al. (2003) where cocaine (70%), marijuana (43%), and opiates (17%) were also the illicit drugs more commonly used during the 30 days before incarceration. As for the participants' self-reports of illicit substance use, our results showed that nearly one out of six participants received specific treatment for drug use in the first month of imprisonment. Moschetti et al. (2015) found a similar disagreement between the self-reported substance abuse and the clinical follow-up due to addiction and revealed that most women that used drugs before prison did not ask for treatment. Contrarily, there may also have been cases of women who needed treatment and who did not have the opportunity to be seen by a health professional able to diagnose and refer them to treatment (Moschetti et al., 2015). Nonetheless, treatment for substance abuse is extremely important to the improvement of the health status of detainees, as well as to their adaptation to the prison and their reintegration into society post-release (Saxena et al., 2014). Prisons can be the place with the optimal conditions for the treatment of drug abuse, where most of the drug users stop their consumption (Moschetti et al., 2015). However, prisons may also present the risk of initiating drug use and the risk of sharing equipment for inmates who continue their addiction (Condon et al., 2007; Fazel et al., 2006).

The majority of participants presented pre-existing clinical diagnoses, which the number of physical problems was more prevalent than mental problems. The physical problems with greater expression in our study were: endocrine, metabolic and nutritional diseases, respiratory diseases, and circulatory diseases. Whereas the most prevalent mental problems were behavioral disorders due to psychoactive substance use, depression, and anxiety disorders. This data goes in line with the literature that points out that women arrived into prison with multiple morbidities, combining psychiatric and somatic disorders (Alves et al., 2016; Conklin et al., 2000; NCCHC, 2002; Young, 1998). Young et al. (1998), in the initial health screening of 154 detained women, determined that 95% reported at least one physical symptom. The most common problems upon admission were dental (87%), menstrual cycle problems (53%), chronic headaches (38%), difficulty sleeping (34%), and depression (33%). Conklin et al. (2000) also showed that new inmates have a high prevalence of health issues. Data from the National Commission on Correctional Health Care (NCCHC, 2002) also highlighted that women enter jails or prisons with serious health problems.

The results revealed that the number of visits by the detained women to the health-care services was also very high. The majority of these health visits were to the primary health nurse, while their contact with other professionals was considerably lower. Previous studies revealed that prisoners are high users of primary health services compared with equivalent community populations (Abbott et al., 2016; Feron et al., 2005; Marshall et al., 2001, Wolff et al., 2011). During these appointments, the number of health complaints was also very expressive, where somatic complaints were more prevalent than mental health complaints. These findings corroborate the data found by Butler et al. (2004), where approximately 90% of men and women had at least one symptom/complaint in the 4 weeks prior to the interview (most common complaints were sleeplessness, tiredness/energy-loss, and headache), which highlights that prisoners suffer from a broad range of health complaints. Moreover, these authors also revealed that detained women reported more symptoms/complaints than men.

The high percentage of illicit substance use and pre-existing clinical diagnosis could explain the need for hospitalizations and the high demand for prison healthcare services during the first month of imprisonment. Feron et al. (2005) revealed that the most common reasons for health visits are linked to drug addictions and associated diseases. However, as Marshall et al. (2001) had already explained, the increased morbidity alone is unlikely to explain the high health service utilization. Other possible explanations for these are the limited access to healthcare outside the prison due to socioeconomic difficulties, better access to health services in prison than in the community, free access to medical appointments, the motivation and the strong desire of being help on the health improvement, legalistic aspect of prisons, the institutional culture of prisons that restricts prisoners the ability to self-care, brief relief from boredom, or the hope for sedative drugs that could be misused or sold to other inmates (Conklin et al., 2000; Feron et al., 2005; Marshall et al., 2001; Wolff et al., 2011).

Considering the morbidity, health complaints, and the detainees' demand for health services, unquestionably prisons face a great challenge in providing compensatory care to these women whose health needs have not been met in the community. At the same time, there is pressure for these interventions to be efficient because health problems that remain untreated during incarceration impacts prisoners as well as the general population (Condon et al., 2007; Fisher & Hatton, 2010), becoming a public health problem (Freudenberg et al., 2007).

Within the prisoners' population, the subgroup of female drug users has been identified as having better health benefits during the imprisonment; perhaps because of the basic care provided inside the prisons, such as regular meals, sleep and hygiene conditions, protection, and access to health services (Alves et al., 2016; Plugge et al., 2008). Comparing the data of women users versus non-users we realized that the users were younger and began their prison sentence with more mental health problems. Furthermore, Mir et al. (2015) also found that addictions are highly comorbid with mental disorders. During the first month of imprisonment, users revealed a higher need for hospitalization, more visits to the clinical services (essentially, primary nurse), and more health complaints. These health issues may compound the adjustment to the prison, as during prison, in addition to sobriety, the consequences for health may be more relevant,

increasing the need for health services (Staton et al., 2003). This high prevalence of substance abuse and consequent co-morbidity in detained women should be considered for adequate interventions (Mir et al., 2015). Findings from Fazel et al. (2006) suggest that it is crucial to thoroughly screen for substance abuse and dependence at prison admission to appropriate treatment.

Based on the work of Fazel and Baillargeon (2010), prison health services must be based on a holistic perspective, bringing together all the specificity and expertise that this population needs. The standardization of care, trained specialists, and specialized techniques are some of the strategies that should be present. In addition, health professionals must act from the first day of imprisonment, recognizing the needs of prisoners and drawing up an intervention plan tailored to the length of incarceration. The continuity of care outside of the prison must also be ensured, with a link to community health services. This could contribute to promote good health outcomes and make prison a place of effective health intervention.

Conclusion

There are limitations associated with this study. First, because this study uses health records, we have to deal with incomplete and missing data. Also, medical record reviews rely on the judgment of the reviewers, which may be subject to bias, though we tried to mitigate that risk by having two independent coders extracting data with strict coding rules. Finally, the small sample size derived from only a single facility from one country may also present some limitations. Thus, our findings may not necessarily be generalized to other female prisons in different countries. This study should be replicated in other settings to support health projects adapted to the current health needs and prison conditions. Future researches could also focus on the evaluation of the effectiveness of drug addiction treatment programs inside the prison context with detained women.

In conclusion, the scarcity of studies in Portugal in this area reinforces the relevance of the present work and is supported by the existing literature. This study results represent a challenge for prison services, once women have gender-specific health needs. These women had high levels of physical health problems and demonstrated a significant need for health care services, especially those who used drugs before their incarceration. Furthermore, the fact that prisoners presented several health complaints and several visits to health services reveal the importance given by women prisoners to health responses, as well as the continuous availability of these services. Despite being a right of all Portuguese citizens, immediate access to health services in the community is often not easy, which is not the case in a prison context, like this one.

The present study aims to inform public policies and professional practices in Portugal about the specific needs of these women, at different levels. Drug use among detained women is often associated with other pre-existing structural conditions, namely lower education levels, unemployment and lower income), alcohol consumption, higher rates of trauma (e.g., van den Bergh et al., 2014), mental disorders and sexually transmitted diseases, like HIV, hepatitis B, and/or hepatitis C (e.g., UNODC, 2014). To answer to

these needs, at a primary and secondary prevention level, community services must to guarantee social protection and health care to women in vulnerable conditions, to reduce the probability of drug use, of developing mental health problems and committing crimes. At tertiary level, these findings support the hypothesis of the poor health of female detainees when they begin their prison sentences, as well as the need for a holistic and specialized healthcare intervention during imprisonment to increase the health status of detainees, their adaptation to the prison, and subsequent successful reintegration in the society. Prison health policies must invest in the design of a well-structured, theoretically sustained intervention plan for women prisoners' health, taking into account the specificities of their life and health before the imprisonment, health risk factors arising from the detention, implemented by well-trained specialists, continued by the community health teams upon release.

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