

Criminal Lifestyle, Psychopathy, and Prison Adjustment among Female Inmates

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Declarations of interest: none.

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Abstract

Several studies have sought the factors that are related with prison adjustment. However, this construct is poorly explored among female populations and even less so in those with characteristics of psychopathy. Thus, the present study aims to understand prison adjustment among female offenders and to determine the role of psychopathy and criminal lifestyle in predicting it. Both institutional infractions and health care utilization were used as indicators of prison adjustment. A sample of 63 female offenders were assessed with the Psychopathy Checklist-Revised (PCL-R) and the Lifestyle Criminality Screening Form-Revised (LSCF-R). 88.9% of female offenders search for health care services and 67.2% had at least one institutional infraction. Logistic regression revealed that PCL-R total scores, LSCF-R total scores and recidivism are predictors of institutional infractions. None of the assessed variables are statistically associated with health care services utilization. These results are of particular importance for psychologists and correctional managers, given the interest in reducing the risk of maladjustment and increase the process of adaptation to prison.

Key words: Psychopathy, Lifestyle, Female Prisoners, Prison Adjustment

Introduction

Early research on prison adjustment has been focused on Clemmer's (1940) concept of prisonization, defined as "the taking on in greater or lesser degree of the folkways, mores, customs, and general culture of the penitentiary" (p. 270). Clemmer believed that all inmates suffer certain influences that he called "universal factors of prisonization", which prepared and often shocked new inmates into readiness to enter in the prisonization process. This incited one of the most stimulating debates in criminological literature between the deprivation and importation models of prisonization. The deprivation model emphasizes the importance of the pressures and problems caused by incarceration in creating an inmate subculture (Sykes, 1958). The importation model emphasizes the effects that pre-prison socialization and experiences can have on the inmate social system (Irwin, 1970).

Despite the oppositional nature of the deprivation and importation models, researchers have suggested that both deprivation and importation variables explain prison adjustment and have attempted to combine the models into a single theoretical perspective (e.g., Leger & Barnes, 1986). Researchers have recognized that a complete prisoner model should include measures of self-attitudes and identities that inmates maintain in the institution (Zamble & Porporino, 1988). Most theorists may overlook how individuals with particular personality traits or self-concepts react to prison life conditions and situations. These experiences, combined with the additional social degradation they must cope while serving time in prison and its coercive structure, constitute a "massive attack" on prisoners' self-esteem (Paterline & Orr, 2016). Thus, prisoners who are strongly committed to their identity are more likely to act in accordance with the values and norms associated with that identity. Prisoners who place high emphasis on many "valued" or "respectable" social identities are more likely to become fully integrated into the prisoners' subculture (Paterline & Orr, 2016). Therefore, prisoners

more integrated into the prison subculture are expected to have the highest recidivism rates and the greatest problems of adaptation to the post-prison world.

Adjustment to prison is a multidimensional construct that can be understood as a process by which behavior or subjective experience changes to adjust to the new environment (Gonçalves et al., 2019). It has been defined in different ways, but the most common definition includes both psychological (e.g., stress, anxiety) and institutional adaptation (e.g., misconduct) (Dhami et al., 2007). Difficulties in prison adaptation can be revealed in disciplinary infractions, physical and/or mental health problems, and maladaptive coping responses (e.g., drug use, violence), which in turn are associated with a higher likelihood of recidivism (Gonçalves et al., 2014). Prisoners' misconduct is an important indicator of inmates' adjustment to prison (Steiner & Wooldredge, 2009). Although most of the studies has focused on disciplinary infractions as an indicator of problems with adjustment to prison (Fedock, 2017; Gonçalves et al., 2019), this is quite reductive (Celinska & Sung, 2014). Thus, other studies point to issues of mental and physical health and the use of health services as indicators of maladjustment (Gonçalves et al., 2019). Prisoners with health problems are more likely to use health services (Diamond et al., 2008; Garrity et al., 2002) which is related to a higher probability of misconduct (DeLisi et al., 2010; Felson et al., 2012).

Literature also points to a relationship between psychopathy and adaptation to prison, with high levels of psychopathy related to an inadequate prison adjustment (Campbell et al., 2009; Gonçalves, 2004; Guy et al., 2005; Leistico et al., 2008; Singh et al., 2011; Walters, 2003). In fact, one of the best predictors of misconduct are personality characteristics, including impulsivity, psychopathic and antisocial traits, and aggression (Gonçalves et al., 2014). Criminal lifestyle has also been related to a negative adaptation to prison and correlated with serious disciplinary infractions (Walters, 2005, 2007). However, studies on prison adjustment were mainly conducted with male samples. In the current study we aimed

to understand prison adjustment among female inmates and determine whether psychopathy and criminal lifestyle are relevant predictors. Both infractions and health care utilization are used as indicators of prison adjustment.

Prison Adjustment among Female Offenders

Research on prison adjustment has been mainly focused on male inmates and the studies examining gender differences point to contradictory findings. While some studies found that female inmates are less likely to commit disciplinary infractions than males (Berg & DeLisi, 2006; Celinska & Sung, 2014; Reidy et al., 2012); others showed that male and female inmates present similar patterns of prison maladjustment (Drury & DeLisi, 2010). Besides, women incarcerated for long periods are more likely involved in dysfunctional behaviors (Drury & DeLisi, 2010), but other studies do not corroborate these findings (Gover et al., 2008). However, prison adaptation strategies and institutional transgressions seem to present gender differences (Berg & DeLisi, 2006; Celinska & Sung, 2014; Drury & DeLisi, 2010; Jiang & Winfree, 2006). Some studies found that minor infractions (i.e., abusive language) were more frequent among female inmates, while more serious infractions (i.e., possession of a weapon) were more frequent among male inmates (Jiang, 2005).

The prison management model might also impact women's psychological adjustment and, therefore, their adaptation to prison. Women serving sentences in a prison whose focus is rehabilitation tend to have a successful adaptation (Kruttschnitt & Gartner, 2005), while women serving time in a high-security prison with more restrictive rules tend to have a poor adjustment (Fedock, 2017). The women's perception of the prison also influences their adaptation. Women who perceive higher levels of security, prison support, and respect from the staff are more adjusted to the context (Slotboom et al., 2011). Additionally, because of their misconduct, women often lose some privileges, such as visits from their children and families, which in turn impact negatively their well-being (Slotboom et al., 2011).

Previous exposure to sexual and physical trauma, mental and dysfunctional disorders, and the co-occurrence of mental health and substance abuse are associated with a greater probability of involvement in misconduct regardless of inmate's gender (e.g., Celinska & Sung, 2014; Jiang & Winfree, 2006; Reidy et al., 2017; Steiner & Wooldredge, 2009). Thus, women appear to be more severely affected by these pre-incarceration factors compared to men (Reidy et al., 2017; Steiner & Wooldredge, 2009).

Psychopathy and Prison Adjustment

Psychopathy has been defined as a clinical construct comprising two related components: the interpersonal and affective traits (e.g., deception, manipulation, shallow affect, lack of empathy, guilt, or remorse); and the antisocial and socially deviant lifestyle aspects of the disorder (e.g., irresponsibility, impulsivity, unethical and antisocial behaviors; Hare, 2003; Neumann et al., 2007). Although the research on psychopathy has been mainly conducted among male samples, evidence supports the psychopathy construct in female offender populations even if its behavioral manifestations are different from men (Rogers et al., 2007; Vaughn et al., 2008; Verona & Vitale, 2019). Psychopathy in women is less prevalent than in men (Beryl et al., 2014; Pinheiro et al., 2019) and psychopathic women's recidivism rate has been found to be lower than the recidivism rate among psychopathic men (Salekin et al., 1998). Studies suggest that manipulative women tend to flirt more often, while men tend to commit fraud (Forouzan & Cooke, 2005), tend to exhibit criminal behavior based on theft and fraud, whereas men generally engage in violence (Harris et al., 2007). The type of aggression also seems to differ between psychopathic women and men. Men are more often physically aggressive and adopt more externalizing aggression (Bailey, 2010) whereas women often reveal verbal, relational (Carrol et al., 2010), and more internalized aggression (e.g., self-mutilation; Lehmann & Ittel, 2012). In a recent study, psychopathy affective facet was positively associated with physical aggression for women and the antisocial facet

positively associated with indirect aggression for men (Thomson et al., 2019). Literature also shows the existence of a group of women who exhibit more violent forms of aggression (to control or obtain the victim's obedience), characterized by hostility and instrumental violence (Bottos, 2007). Women with psychopathic traits are more likely to belong to this group, presenting more male forms of violence and criminal versatility (Vitale et al., 2002).

Several meta-analyzes have shown that psychopathy, aggression, institutional risk, and criminal lifestyle were significantly related to misconduct in prison (Campbell et al., 2009; Guy et al., 2005; Leistico et al., 2008; Singh et al., 2011; Walters, 2003). It also revealed that PCL-R Factor 2 (socially deviant/antisocial) exceeds Factor 1 (interpersonal-affective) in predicting future institutional adjustment (Guy et al., 2006; Walter, 2003). Regarding female inmates, studies showed that personality disorders were associated with criminality and violence (Kurth, 2011), and the number of criminal convictions was significantly associated with psychopathy (Loucks & Zamble, 2000). Warren et al. (2005) found that women with psychopathic traits were more likely to be responsible for institutional violence. Recent literature suggests an overlap between psychopathic traits and unplanned impulsivity in understanding violent behavior in women and that the psychopathy affective component can explain female violence in prison (Thomson et al., 2019). Thus, psychopathy is an important predictor of general offenses in female offenders and plays an important role in predicting violent behavior and prison maladjustment (Loucks & Zamble, 2000).

Criminal Lifestyle and Prison Adjustment

Walters (1998) developed a cognitive model in which crime is conceptualized as a lifestyle marked by irresponsibility, self-indulgence, intrusive interpersonal behavior, and violation of social rules. These factors interact with each other and promote the type of behavior that defines an individual's criminal lifestyle (Walters, 2012). In some of his studies on prison adaptation in male samples, Walters (2005, 2007) found that the criminal lifestyle,

as measured by the Lifestyle Criminality Screening Form-Revised (Walters, 1995), correlates with serious disciplinary infractions (involving violence), but not with simple ones (not involving violence), nor with the total number of offenses committed. Thus, due to their repeated association with delinquent groups and activities, some offenders have strong criminal attitudes and identities, and are more susceptible to involve in disruptive behavior (Hochstetler & DeLisi, 2005).

Research on the relationship between criminal lifestyle and adaptation to prison in women is scarce. More recent studies have been focusing their attention on the trajectories of inmate behavior hypothesizing that longer criminal and violent careers are a crucial element to perpetuate prison's infractions and violence (e.g., DeLisi & Piquero, 2011; Reidy & Sorensen, 2017). Although most of these studies were conducted among male samples, research also revealed that female inmates are a heterogeneous group regarding the commission of disciplinary infractions, with a subgroup maintaining a limited pattern of serious rule infractions and other groups showing different patterns of misconduct. The groups who showed the higher levels of infractions are those who had higher percentages of violent offenders, higher rates of prior arrests, violent arrests, mental health problems, and violent risk scores (e.g., Cochran & Mears, 2017; Reidy et al., 2017; Russel et al., 2020).

In sum, studies revealed that women characterized by a lifestyle of involvement in offenses have higher rates of recidivism and a more complex criminal pattern, with propensity for violence in the prison context (Larroulet et al., 2020). Additionally, negative social support mechanisms can propagate criminal prospects originating in society, as well as in prison, and prisoners with longer criminal careers and longer sentences tend to show higher rates of prison infractions (Jiang & Winfree, 2006).

Current study

In Portugal there is a lack of studies exploring adjustment to prison among female offenders. The studies concerning to psychopathy and criminal lifestyle are also scarce in our country, especially among women. Given that literature identifies psychopathy and criminal lifestyle as predictors of inmates' adjustment to prison (e.g., Campbell et al., 2009; Gonçalves et al., 2014; Guy et al., 2005; Leistico et al., 2008; Walters, 2003) and given the implications of inmate adjustment to prison for correctional practices, this topic deserves special attention. Likewise, the female prison population has been growing in Portugal. Between 2010 and 2020, the number of women incarcerated increased 38% (General Directorate of Reintegration and Prison Services, 2020), affecting prison safety, the conditions of confinement, staff-inmate relationships, and prisoners' access to rehabilitation programs and activities (e.g., Bierie, 2012; Dirkzwager & Kruttschnitt, 2012). These conditions may affect, in turn, inmate's adjustment to prison life and therefore post-release adaptation (Haney, 2003). Thus, it is important to better understand how those women adjust to prison life to improve correctional practices and the efficiency of prison systems.

Method

Participants

The sample included 63 female prisoners. As displayed in Table 1 the participants' age was, in average, 27.29 years ($SD = 10.06$), ranging between 21 and 66 years old. Most of the participants was Portuguese (88.9%) and half of them was single (50.8%). The sentence length was in average 77.34 months ($SD = 65.87$), ranging between 2 and 300 months. The most part of the participants was convicted (93.7%), more than a half was recidivist (55.6%) and 42.9% ($n = 27$) was sentenced for drug dealing. 18.8% ($n = 12$) of the female offenders' abuse drugs while in prison, and 79.7% ($n = 51$) had regular visits in prison.

[INSERT HERE TABLE 1]

Procedure

Authorization to assess the female inmates was obtained from the General Directorate of Reintegration and Prison Services – Ministry of Justice (DGRSP-MJ). Data were collected in one national female prison. Participants were selected by convenience: those who were working, at school or resting were contacted, all procedures were explained, and the informed consent was obtained. Participation in the study was anonymous and voluntary. All the participants then completed the questionnaires. To speak Portuguese and to have reading abilities were defined as inclusion criteria, to avoid results' bias, since the measures used required minimal reading skills. After that, participants' individual files were analyzed to collect additional information. All ethical procedures established by the Portuguese legislation were followed.

Instruments

Sociodemographic and Juridical-Legal Questionnaire. The sociodemographic and juridical-legal questionnaire was developed to the purposes of the present study and aims to gather information on sociodemographic (e.g., age, marital status, nationality) and juridical-legal variables (e.g., crime, sentence length, recidivism). Perpetrators' individual files were also fully analyzed to obtain/complete information about criminal and antisocial history and to fulfill the Hare's Psychopathy Checklist – Revised (PCL-R) and the Lifestyle Criminality Form-Revised (LSCF-R).

Hare's Psychopathy Checklist – Revised – PCL -R (Hare, 1991, 2003). PCL-R is a 20-item checklist that uses a semi-structured interview, case-history information, and specific scoring criteria to rate each item on a three-point scale (0 = not applied, 1 = applied somewhat, 2 = fully applied). The total score, resulting from the sum of each item's score, varies between 0 and 40. A score equal or superior to 30 indicates the presence of psychopathy; between 20 and 29, points out mixed characteristics or moderate psychopathy; below 20, reflects low levels of psychopathy. The PCL-R has shown high levels of internal

consistency and inter-rater reliability (Hare & Neumann, 2005). An early exploratory factor analysis revealed two correlated dimensions - factor 1 and factor 2 - that showed a satisfactory internal consistence. In a latter formulation, Hare and Neuman (2005) advocated that at least four factors are needed to represent PCL-R construct of psychopathy: interpersonal, affective, lifestyle and antisocial. In the current study the PCL-R Portuguese version was used (Gonçalves, 1999), that showed an internal consistency of .84. In the present sample, the internal consistency for the four factor model ranges between .58 (antisocial facet) and .82 (interpersonal facet).

Lifestyle Criminality Screening Form – Revised - LCSF-R (Walters, 1998). LCSF-R is a forensic evaluation instrument that functions as a checklist, identifying and quantifying four styles: Irresponsibility, Self-Indulgence, Intrusive Interpersonal Behaviour, and Violation of Social Rules (Walters, 1998). Scoring the LCSF-R is based on prisoners' individual files. Each item is scored in a three-point scale (0, 1 or 2) and the total score may vary between 0 and 22. A score equal or higher than 10 indicates the existence of a criminal lifestyle. In this sample it was used the original instrument (Walters, 1998), showing good psychometric properties (Cronbach's alpha between .93 e .96). For the current sample, the internal consistence was .58.

Data analysis

All the analyses were conducted using the SPSS (Statistical Package for the Social Sciences) Version 27. Descriptive statistics were performed using measures of central and dispersion tendency to describe the sample and the main measures. Pearson and point biserial correlations and chi-square tests were used to analyze the associations between the variables included in the present study. Two binary logistic regressions were used to test associations between the predictive variables and health care utilization in prison and two linear

regressions were performed to test associations between the predictive variables and number of infractions in prison.

Results

Descriptive Data

Table 2 displays the descriptive statistics for LSCF-R and PCL-R scores. Analyzing the LSCF-R total scores, participants presented an average of 5.11 ($SD = 2.79$). The mean average of PCL-R total scale was 10.30 ($SD = 6.66$). In the PCL-R facets, results revealed that female offenders presented higher scores on lifestyle and affective facet. The antisocial facet presented the lowest scores. The analyses of the PCL-R total scores revealed that no women scored above 30 points and only 9 of them scored for moderate psychopathy (PCL-R score between 20 and 30).

[INSERT TABLE 2 HERE]

Correlations between the main variables are presented in Table 3. Positive significant correlations were found between several variables and PCL-R total and facets, LSCF-R, and prison adjustment indices. On the contrary, we found negative statistically significant correlations between sentence length and recidivism and PCL-R affective facet.

[INSERT HERE TABLE 3]

Health Care Utilization

About 88.9% ($n = 56$) of the female offenders' search for health care services; 38.1% for physical problems and 50.8% for mental problems.

Table 4 displays two binary logistic regression coefficients for health care utilization. The PCL-R total scores, age, sentence length, recidivism, number of infractions, LSCF-R total scores, drug abuse and visits in prison enters in the first logistic regression and PCL-R facets, age, number of infractions, sentence length, recidivism, LSCF-R total scores, drug abuse and visits in prison enters in the second logistic regression.

In the first model the variables produced a non-statistically significant model, $\chi^2(8) = 5.260, p = .729$. The role of such variables produced a pseudo- R^2 between 8.5% (Cox & Snell) and 17.7% (Nagelkerke), indicating that the model accurately classified 89.9% of the cases. A separate analysis of the variables used for the prediction of the health care utilization revealed that none of the variables made a significant contribution to the model.

The second model also reveals non-statistically significant, $\chi^2(11) = 10.685, p = .470$. The variables produced a pseudo- R^2 between 16.6% (Cox & Snell) and 34.4% (Nagelkerke), accurately classifying 89.8% of the cases. Analyzing individually the variables, having visits in prison (OR = 11.108, 95% CI [.735, 167.850]) presents a marginal positive correlation with health care utilization and PCL-R interpersonal facet (OR = .517, 95% CI [.247, 1.078]) reveals a marginal negative association with health care utilization. Thus, each unit increase in the PCL-R interpersonal facet multiplies the odds of health care utilization by .517 and having visits in prison puts women at 11.108 times greater odds of health care utilization.

[INSERT HERE TABLE 4]

Institutional Infractions

Among the female offenders, 31.3% ($n = 20$) had no institutional infractions and 67.2% ($n = 43$) had at least one infraction in prison. The most prevalent type of institutional infractions were physical aggressions towards partners ($n = 20, 16.39\%$), infractions towards correctional staff ($n = 23; 18.85\%$), verbal aggressions towards partners ($n = 24; 19.67\%$), and misconduct behaviour ($n = 31; 25.41\%$). The number of institutional infractions varied from 0 to 33, with an average of 5.52 infractions ($SD = 7.79$).

Two linear regressions were conducted to determine the relationship between the predictive variables and the number of institutional infractions (Table 5). The first model included PCL-R total scores, age, sentence length, recidivism, health care utilization, LSCF-R total scores, drug abuse and visits in prison as predictive variables and PCL-R facets, age,

health care utilization, sentence length, recidivism, LSCF-R total scores, drug abuse and visits in prison enter as predictive variables in the second model.

In the first model, the set of variables significantly predicted the number of institutional infractions, $F(8), 1587.141, p = .000$. Together, these variables accounted for 43.3% of the variance. PCL-R total scores ($\beta = .320, p = .018$) and LSCF-R total scores ($\beta = .412, p = .002$) were positively related with the number of infractions. Recidivism ($\beta = -.263, p = .056$) presented a negative marginal correlation with the number of infractions and drug abuse ($\beta = .211, p = .077$) showing a positive marginal correlation with the number of infractions.

The second model also revealed statistically significant, $F(11) = 1728.248, p = .001$. These variables accounted for 47.2% of the variance. A separate analysis of the variables revealed that LSCF-R total scores ($\beta = .532, p = .000$) was positively related with the number of infractions, and recidivism ($\beta = -.344, p = .019$) was negatively correlated with the number of infractions. Sentence length ($\beta = -.256, p = .074$) presented a negative marginal correlation with the number of infractions, and PCL-R interpersonal facet ($\beta = .279, p = .062$) presented a positive marginal association with the number of infractions.

[INSERT HERE TABLE 5]

Discussion

The present study aimed to increase our understanding on adjustment to prison among female offenders, specifically whether psychopathy and criminal lifestyle predict female's prison adjustment. It was designed to extend previous research on female adjustment to prison, an understudied topic since the empirical and theoretical basis of knowledge about prison adjustment is strongly dominated by male studies (Cauffman, Fine, Thomas, & Monahan, 2017). Female inmates' infractions and health care utilization were considered due to their relevance as indicators of institutional adjustment (Gonçalves, 2004; Gonçalves et al., 2014).

Results revealed that nearly 89% of female offenders used health care services; almost

two fifths for physical problems and more than a half for mental problems. This is consistent with previous studies that report high rates of ambulatory care utilization and hospitalization among inmates (e.g., Kouyoumdjian et al., 2018; Moschetti et al., 2017; Nobile et al., 2011). These results might be explained by the fact that women have gender-specific health needs, highlighting the high rates of substance use disorder, previous trauma and abuse, mental illnesses, and sexually transmitted infections (STDs), when compared to incarcerated men (Bronson & Berzofsky, 2017; Harner & Riley, 2013; Sufrin et al., 2015). The high prevalence of health care utilization may also reflect a higher access to health care services when in prison. Since prisons seems to minimize differences in economic status and health coverage it can influence the access to health services and treatments, making prisons a unique context to provide health care to individuals socially excluded (e.g., Freudenberg, 2001). At last, the high rates of health services use may suggest that the prison system is able to provide health care for inmates when those are needed (Gonçalves et al., 2014). However, future research should identify reasons for increased use of health care services among female prisoners.

Concerning predictors of health care utilization, no statistically significant results were found; however, receiving visits in prison and PCL-R interpersonal facet were marginally associated with health care utilization. Thus, female prisoners who receive visits in prison are more likely to use health care services while female inmates with higher scores in PCL-R interpersonal facet are less likely to use health care services. These results seem contradictory since health care use is conceptualized as an indicator of institutional adjustment. Literature refers that receiving visits in prison can reduce prison misconduct (e.g., Cochran, 2012; Graeve et al., 2007), helping inmates to build friendships, deal with prison life and improve their well-being (Bales & Mears, 2008; De Claire & Dixon, 2015). Besides, visits and social support from family and friends during incarceration may be an important factor for encouraging female inmates to use health services (Nowotny, 2017), which may be beneficial for their health.

Literature also points that offenders high on psychopathy might be less likely to perceive a need for treatment due to their emotional deficits and their incapability to acknowledge their behavior as problematic (Cleckley, 1941; Pinheiro et al., 2019) and that women with higher scores in the interpersonal facet exhibit evidence of psychological resilience (Hicks et al., 2010). Thus, perhaps the opposite, i.e., low scores on the interpersonal facet were related to a higher perception of health needs and to a higher insight on their behaviors, which may lead them to seek for health services. However, this assumption needs to be further analyzed. Together, our results seem to suggest that health care utilization by women more than an indicator of maladjustment might be an indicator of inmates' awareness of their needs and availability of resources. As Anderson (1995) suggested, in his Behavioral Model of Health Service Use, the utilization of health services is a function of individuals' predisposing characteristics, enabling resources, perceived need, and evaluated need.

Results from the current study showed that almost 68% of female offenders had at least one institutional infraction, which is consistent with previous studies (Gover et al., 2008; Steiner & Wooldredge, 2013). Higher rates of institutional infractions among female offenders might be related with the fact that imprisoned women deal with several stressors during incarceration (e.g., previous abuse, mental health problems, separation of children and family). As a result, psychological maladjustment will be more frequent (e.g., Heilbrun et al., 2008; Kruttschnitt & Vuolo, 2007), which, in turn, can be associated with institutional misconduct (Gover et al., 2008; Wichmann et al., 2002).

Regarding predictors of institutional infractions, PCL-R total score, PCL-R interpersonal facet, LSCF total score, recidivism, drug abuse, and sentence length were significantly related to institutional infractions. Higher scores on PCL-R, PCL-R interpersonal facet, LSCF, and drug abuse were strong predictors of female inmates' institutional infractions. Previous research revealed that high scores on psychopathy were significantly associated with

violations of institutional rules and general and violent misconduct in prison (Campbell et al., 2009; Guy et al., 2005; Leistico et al., 2008; Singh et al., 2011; Walters, 2003a). In fact, PCL-R total scores correlate with high interpersonal dominance, high aggression, high rebelliousness as well as low agreeableness, low conscientiousness, low social closeness, and low behavioral constraint (Lynam & Derefinko, 2006; Vitale et al., 2002), factors that may favor the breaking of institutional rules. Although only marginally significant, the PCL-R interpersonal facet was the one that is associated with institutional infractions, which is consistent with prior studies (Guy et al., 2005). Female prisoners high in interpersonal facet are essentially characterized by absence of empathy and remorse, superficial affection, a notorious egocentric grandeur, and a grandiose, arrogant and manipulative interpersonal style (Hare, 2003), which is related with high interpersonal dominance (Hicks & Patrick, 2006; Kennealy et al., 2007). This style of functioning may act as facilitator for misbehavior and rule breaking during imprisonment. A criminal lifestyle also predicts institutional misconduct. This is consistent with previous studies that found that individuals with a higher criminal lifestyle tend to show a more negative adaptation to prison (Gonçalves & Gonçalves, 2012). These results may be supported by the constellation of emotional, interpersonal and behavioural characteristics of these individuals, leading to a pathological functioning, which enhances the risk for the emergence of extremely antisocial behaviors (Blair et al., 2005).

Other variables revealed only a marginal relationship with institutional infractions, such as recidivism, drug abuse, and sentence length. Drug abuse is marginally related with the number of infractions in prison, which is consistent with prior studies (e.g., Cunningham & Sorensen, 2007; Houser & Belenko, 2015; Jiang, 2005). This result might suggest that correctional institutions respond in a punitive way to the symptomatic manifestations of drug abuse disorders among female offenders (Houser & Belenko, 2015) since drug consumption is an infraction itself. On the other hand, it is known that women who have been involved

with drug use outside are likely to continue to use drugs in prison (Leigey, 2019) increasing their involvement in disciplinary offenses. On the contrary, recidivism and sentence length were protective factors for institutional misconduct, since recidivist female offenders with longer sentences have a lower number of infractions. Although these findings seem contradictory, other studies have found similar results (e.g., Gover et al., 2008). Possibly inmates who know that they will be incarcerated for a long time were less likely to engage in misconduct because it would negatively affect their quality of life and lead to greater deprivations (e.g., loss of work, special visitation privileges; Leigey, 2019). Another possible explanation is that perhaps inmates who were expecting to serve longer periods in prison may accept institutional rules and therefore exhibit successful adjustment to prison (Gover et al., 2008). Concerning to recidivism, our results revealed that experiencing prior sentences decreased the likelihood of institutional infractions, which is in accordance with Gover et al.'s (2008) findings. This result suggests that recidivist females might be better able to adjust to prison life, perhaps because they were more aware and responsive to the consequences of their previous institutional infractions (Gover et al., 2008). However, since these variables were only marginally significant predictors of institutional infraction further studies are needed to support these findings.

The current study has some practical implications, as our results bring support to the inclusion of psychopathy and criminal lifestyle in female inmates' assessments. This is important because not only these variables were found to be risk factors for institutional misbehavior but also they will be meaningful in terms of female prisoners' classification and risk management. Prisons should pay more attention to female prisoners who show traits of psychopathy and criminal lifestyle and provide them with early intervention. Therefore, an effective risk assessment is crucial not only for decision making, but also to support professionals in identifying the most appropriate intervention to reduce the risk of repetition

of behavior problems and to promote rehabilitation (Canda et al., 2015; Gonçalves et al., 2014; Tunte, de Vogel, & Stam, 2014;). In addition, training programs for prison staff will be helpful (Leigey, 2019).

The second practical implication is supported by the fact that, in our study, recidivism is negatively associated with the number of infractions, suggesting that other variables (e.g., psychopathy and lifestyle) should be considered in the allocation of prisoners, since in female inmates it seems to function as a protective factor for engaging in conduct problems while serving time. Historically, female offenders were not included in the empirical research and the institutional risk assessment scales were standardized and validated in male samples (Van Voorhis, 2012). Therefore risk assessment in women might be better assessed if a thoughtful to gender approach is added (Van Voorhis et al., 2010). Furthermore, these differences have strong implications for architecture, custody environments, supervisory strategies, and other correctional policies (Van Voorhis et al., 2009; Wright et al., 2012).

Nevertheless, some limitations must be considered when interpreting the results of the present study. First, it should be noted that the sample size is small and not representative of the Portuguese female inmates, affecting the statistical power, which may justify the absence of significant or slightly significant results. Besides considering larger samples of incarcerated women, a longitudinal study will be a good opportunity to understand their prison adjustment. Analyses over time are particularly important since literature revealed different patterns of adjustment to prison over time (e.g., Gonçalves et al., 2014; Cochran, 2012). Second, the infractions and use of health services were based on official records, which may underestimate prison misconduct, as some infractions may not have been recorded or are unknown to the correctional staff (Braga et al., 2019; Wolf et al., 2007). Again, a longitudinal study, combining the events officially recorded with inmates' self-report can provide a more robust measure (Warren et al., 2018).

In sum, the current study holds an important contribution for understanding the relationship between psychopathy, criminal lifestyle, and adjustment to prison in female prisoners. In addition, it includes two indicators of adjustment to the prison context, which, despite the need for further research, appear to be strong predictors of the adjustment of incarcerated women. On the other hand, it demonstrated that psychopathy and the criminal lifestyle in women are related to a greater number of infractions, while the use of health services did not show a significant relationship. These results are of particular importance for psychologists and correctional managers (Gonçalves, et al., 2014), given the interest in reducing the deleterious effects of maladjustment to the prison environment (Jiang & Fisher-Giorlando, 2002).

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Table 1*Sociodemographic characterization and Juridical-legal characterization*

Variables		N (%)
Marital Status	Single	32 (50.8%)
	Divorced/Separated	13 (20.6%)
	Married/Civil Union	13 (20.6%)
	Widowed	5 (7.9%)
Sociodemographic variables	Portuguese	56 (88.9%)
	Brazilian	3 (4.8%)
	French	1 (1.6%)
	Venezuelan	1 (1.6%)
	Spanish	1 (1.6%)
	Romanian	1 (1.6%)
Juridical-legal variables	Crimes against people	8 (12,7%)
	Crimes against property	24 (38,1%)
	Crimes against life in society	3 (4,8%)
	Crimes against the government	1 (1,6%)
	Crimes related to drug dealing	27 (42,9%)
Juridical Situation	Remand	4 (6,3%)
	Convicted	59 (93,7%)
First-Time/Recidivist	First time	28 (44,4%)
	Recidivist	45 (55,6%)

Table 2

Means and Standard Deviations of LSCF-R Scores and PCL-R Scores

	M	SD
LSCF-R total	5.11	2.79
PCL-R total	10.30	6.66
Interpersonal	1.89	2.23
Affective	2.33	2.27
Lifestyle	3.51	2.35
Antisocial	1.57	1.68

Note. LSCF-R = Lifestyle Criminality Screening Form – Revised; PCL-R = Psychopathy Checklist-Revised.

Table 3

Correlation Matrix.

	Sentenc e length	Recidivis m	PCL- R Total	PCL-R F1	PCL-R F2	PCL-R F3	PCL-R F4	LSCF- R Total	Drug abuse	Health care use	No. infractions	Visits
Age	.027 ^a	.077 ^a	.090 ^a	.168 ^a	.342*** ^a	-.097 ^a	-.118 ^a	-.073 ^a	-.034 ^b	.081 ^b	-.064 ^a	.107 ^b
Sentence length		-.477*** ^b	.272* ^a	.285* ^a	-.482*** ^a	.035 ^a	-.007 ^a	.049 ^a	-.202 ^b	.099 ^b	-.055 ^a	-.150 ^b
Recidivis m			.142 ^b	.042 ^b	-.123 ^b	.126 ^b	.345*** ^b	.278* ^b	7.829** ^c	.804 ^c	.098 ^b	2.965 ^c
PCL-R Total				.752*** ^a	.668*** ^a	.734*** ^a	.740*** ^a	.521*** ^a	.216 ^b	.031 ^b	.491*** ^a	-.045 ^b
PCL-R F1			a		.574*** ^a	.315* ^a	.361*** ^a	.197 ^a	.006 ^b	-.132 ^b	.339*** ^a	-.043 ^b
PCL-R F2						.233 ^a	.215 ^a	.072 ^a	.574*** ^b	.097 ^b	.201 ^a	-.215 ^b
PCL-R F3							.626*** ^a	.315* ^a	.233 ^b	.099 ^b	.382*** ^a	.036 ^b

PCL-R F4	.215 ^a	.626***	-.030 ^b	.450**** ^a	-.003 ^b
		b			
LSCF-R		.156 ^b	.032 ^b	.531**** ^a	-.039 ^b
Total					
Drug			.116 ^c	.307* ^b	1.104
abuse					c
Health				.339** ^b	2.895
care use					c
No.					.059 ^c
Infraction					
s					

Note. * $p < .05$; ** $p < .01$; $p < .001$. ^a Pearson correlation; ^b Point biserial correlation; ^c Chi-square. LSCF-R = Lifestyle Criminality Screening Form – Revised; PCL-R = Psychopathy Checklist-Revised; PCL-R F1 = Interpersonal facet; PCL-R F2 = Affective facet; PCL-R F3 = Lifestyle facet; PCL-R F4 = Antisocial facet.

Table 4

Logistic Regression Models for Health Care Utilization

	Model 1						Model 2					
	B	S.E.	Wald	Exp(B)	L	H	B	S.E.	Wald	Exp(B)	L	H
Age	.013	.052	.067	1.013	.916	1.121	.038	.088	.189	.664	.875	1.234
No. infractions	-.069	.079	.753	.934	.800	1.090	-.090	.111	.651	.420	.735	1.137
Sentence length	-.001	.011	.003	.999	.978	1.022	-.002	.016	.021	.884	.966	1.030
Recidivism	-2.171	1.516	2.052	.114	.006	2.224	-1.498	1.780	.709	.400	.007	7.310
Drug abuse	1.336	1.480	.815	3.804	.209	69.124	.755	1.752	.186	2.128	.069	65.904
Visits	1.544	1.092	1.999	4.684	.551	39.845	2.408	1.385	3.020	11.108	.735	167.850
LSCF-R	.193	.209	.857	1.213	.806	1.825	.055	.283	.037	1.056	.606	1.839
PCL-R Total	-.010	.092	.011	.990	.827	1.186						
PCL-R F1							-.661	.375	3.098	.517	.247	1.078
PCL-R F2							.833	.55	2.251	2.299	.775	6.824
PCL-R F3							.404	.401	1.017	1.498	.683	3.283
PCL-R F4							-.220	.502	.192	.803	.300	2.147

Note. LSCF-R = Lifestyle Criminality Form – Revised; PCL-R = Psychopathy Checklist-Revised; PCL-R F1 = Interpersonal facet; PCL-R F2 = Affective facet; PCL-R F3 = Lifestyle facet; PCL-R F4 = Antisocial facet.

Table 5

Linear Regression Models for Number of Infractions.

	Model 1						Model 2					
	B	S.E.	β	t	L	H	B	S.E.	β	t	L	H
Age	-.024	.087	-.030	-.277	-.200	.151	-.035	.096	-.43	-.359	-.228	.159
Health care use	-2.575	2.883	-.099	-.893	-8.366	3.215	-.983	3.013	-.038	-.326	-7.046	5.079
Sentence length	-.026	.016	-.217	-1.671	-.058	.005	-.031	.017	-.256	-1.828	-.065	.003
Recidivism	-4.214	2.157	-.263	-1.954	-8.547	.118	-5.514	2.277	-.344	-2.422	-10.094	-.934
Drug abuse	4.135	2.289	.211	1.806	-.463	8.732	3.752	2.497	.192	1.502	-1.272	8.775
Visits	2.479	2.361	.118	1.050	-2.262	7.220	2.363	2.525	.113	.936	-2.717	7.443
LSCF-R	1.182	.368	.412	3.212	.443	1.922	1.528	.392	.532	3.902	.740	2.315
PCL-R Total	.394	.161	.320	2.443	.070	.718						
PCL-R F1							.981	.514	.279	1.909	-.053	2.015
PCL-R F2							-.008	.577	-.002	-.014	-1.169	1.152
PCL-R F3							-.562	.555	-.162	-1.014	-1.678	.554
PCL-R F4							1.140	.762	.244	1.496	-.393	2.673

Note. LSCF-R = Lifestyle Criminality Form – Revised; PCL-R = Psychopathy Checklist-Revised; PCL-R F1 = Interpersonal facet; PCL-R F2 = Affective facet; PCL-R F3 = Lifestyle facet; PCL-R F4 = Antisocial facet.