

## **Psychopathology and female detention at the “Pagliarelli” jail of Palermo: preliminary results**

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### **Abstract**

Most of the studies carried out on prisoners have considered male samples or they investigated specific psychiatric disorders. The present study aims to estimate the presence of current and lifetime psychiatric disorders among female inmates. Secondary aims are to evaluate the correlation between a current psychiatric disorder and other variables, and the association with a psycho-pharmacotherapy and a request for a clinical psychological interview.

The study included 25 women with a final sentence at the “Casa Circondariale Pagliarelli” from October 2016 to July 2017. The Mini International Neuropsychiatric Interview (MINI) was used to assess the presence of any current or lifetime psychiatric disorder. Exact two-side Fisher test and independent

samples Mann-U-Whitney test were used when appropriate to compare characteristics of people with and without a current or lifetime psychiatric history.

Eleven inmates presented a psychiatric disorder at the time of the interview, nine of them had a history of past diagnosis. These percentages are higher than that expected in the general population but are lower than those found in previous studies on larger male samples. A major depressive disorder was predicted by a more extended period spent in prison, away from loved one people. Almost the totality of women with a current psychiatric diagnosis asked for psychological support and took medications, especially benzodiazepines alone or in combination with other drugs.

The study suggests the need to determine the specific characteristics that differentiate men from women in the adaptation to the custodial regime.

Keywords: female detention, prevalence, prison, psychiatric symptoms

## Introduction

Internal pathologies and psychiatric disorders in prisoners occur at high rates (Fazel & Seewald, 2012; Voller et al., 2016), which means a high demand for healthcare professionals, in the prison population. Moreover, the presence of mental disorders involves a higher risk of prisoners' suicide and self-harm (Fazel, Cartwright, Norman-Nott, & Hawton, 2008; Pret & Cascio, 2006).

Most of the studies carried out on prisoners have considered male samples only (Piselli, Elisei, Murgia, Quartesan, & Abram, 2009), or they have included men and women indistinctly (Macciò et al., 2015) probably due to the minor presence of female among the detention population (4%) (<https://www.giustizia.it/giustizia/it>).

Medical research, which specifically studied women in detention, mainly concerns the presence of infectious diseases such as HIV and hepatitis C (Strazza, Azevedo, Carvalho, & Massad, 2004; Strock, Mossong, Hawotte, & Arendt, 2009) gynaecological diseases such as Trichomonas vaginal infection (Garcia et al., 2004), screening for breast cancer and HPV infection

(Binswanger, White, Pérez-Stable, Goldenson, & Tulskey, 2005; Nijhawan, Salloway, Nunn, Poshkus, & Clarke, 2010).

The most investigated disorders in psychiatry research are substances abuse (Jackson et al., 2010), Attention Deficit Hyperactivity Disorder (ADHD) (Edvinsson, Binge-fors, Lindström, & Lewander, 2010), aggressive behavior and Post-Traumatic Stress Disorder (PTSD) and its correlation with sexual abuse in childhood (Pret & Cascio, 2006).

To our knowledge, data on the prevalence and antecedents of psychiatric disorders in women detained are lacking. Furthermore, only a few studies (Drapalski, Youman, Stuewig, & Tangney, 2009; Lindquist & Lindquist, 1997) have investigated the relationship between psychological distress generated by detention and request for psychological and psychiatric assistance.

#### Aims

- 1) To estimate the presence of current and lifetime psychiatric disorders among female inmates.
- 2) To evaluate the correlation between a current psychiatric disorder and other variables, such as years spent in prison, residual months to spend in jail, the type of crime and the number of monthly visits by family members.
- 3) To evaluate the association between a current psychiatric diagnosis and a psycho-pharmacotherapy and a request for a clinical psychological interview.

## Methods

During the period of the study, the prison of Palermo housed 1256 detainees. Women represented 4.14% (N=52) of them. The study included 25 women with a final sentence at the “Pagliarelli” jail from October 2016 to July 2017, able to correctly understand Italian. We choose an opportunity sampling (included N=25), by excluding women who did not receive the final sentence at the time of the study (excluded N=27), who are thought “innocent until proven guilty” and probably committed for a variable period.

The Ministry of Justice, the PRAP (Regional Office for the Penitentiary Administration), the director of the Pagliarelli jail, together with a commission of operators, ethically authorised the study and a work order to carry on the research. The interviews were carried out inside the library room. No prisoners refused to attend the interview, and they all signed an informed consent form.

All data was coded and analysed using the Statistical Package for Social Science, version 23 (SPSS, 1994). Exact two-side Fisher test and independent samples Mann-U-Whitney test were used when appropriate to compare characteristics of people with and without a current or lifetime psychiatric history.

## Instruments

Each inmate was given a questionnaire concerning personal and family socio-demographic information, legal history, current detention, health status, smoking, use and abuse of alcohol and drugs.

The section dedicated to socio-demographic information included age, place of birth, marital status, pre-detention family setting, level of education, pre-detention employment, family members' city of residence.

Legal history questionnaire collected information about the crime linked to the current imprisonment, previous convictions, months already spent in prison (even if in different institutions), the amount of residual sentence in months, the presence of other prisoners within the family unit, any disciplinary measures or special surveillance periods.

The section dedicated to the detention concerned the self-ascribed major causes of stress during the detainment, work or laboratory activities carried out by prisoners, the request of psychological and psychiatric interviews.

A section of the questionnaire specifically investigated general health: the presence of current and previous internist pathologies, the current menstrual cycle and during the first period of imprisonment, the presence of psychiatric disorders preceding the punishment, the use of psychotropic drugs before detention. Finally, tobacco use and alcohol or substances abuse before imprisonment were explored. Information on psycho-pharmacological therapy was collected with the collaboration of the medical and nursing staff.

The Mini International Neuropsychiatric Interview (MINI) (Lecrubier et al., 1997) was used to assess the presence of any current or lifetime psychiatric disorder. The MINI is a structured interview, able to detect a wide range of current and lifetime diagnoses, including mood, anxiety, substance abuse-related, psychotic and stress-related disorders according to the DSM-IV criteria.

The validity and reliability, the indices of specificity and sensitivity of the MINI are considered good or very good and this test was already used on samples of prisoners with satisfactory results (Bazerman, 2005).

## Results

### Socio-Demographic Characteristics of the Sample

The average age was 49 years. Only three of the detainees came from a foreign state. Most of the Italian prisoners were from Sicily. The most common district of origin was Trapani, followed by Palermo. The majority of the families' city of residence was outside the city of Palermo. Most of the women (68%) were living with their husband/partner before the detention. The most identified educational level was the junior high school. Most of the detainees were employed before detention (Table 1).

Age, Mean (sd)	49 (9.36)
City, N (%)	
Sicily Region	21 (84)
Trapani	8 (32)
Palermo	6 (24)
Messina	4 (16)
Agrigento	1 (4)
Caltanissetta	1 (4)
Catania	1 (4)
Piedmont Region (Turin)	1 (4)
Foreign Countries	3 (12)
Yugoslavia	1 (4)
Romania	1 (4)
Nigeria	1 (4)
Family members' city of residence, N (%)	
Sicily Region	22 (88)
Palermo	7 (28)
Trapani	8 (32)
Messina	3 (12)
Caltanissetta	1 (4)
Catania	1 (4)
Siracusa	1 (4)
Ragusa	1 (4)
Piedmont Region (Turin)	1 (4)
Emilia-Romagna Region (Parma)	1 (4)
Pre-detention housing situation, N (%)	
Partner/husband and children	12 (48)
Partner/husband	5 (20)
Children	3 (12)
Alone	4 (16)
Others	1 (4)
Educational level, N (%)	
Degree	2 (8)
High school	4 (16)
Junior high school	14 (56)
Elementary school	2 (8)
No education	3 (12)
Pre-detention employment, N (%)	
Regular job	14 (56)
Housewife	4 (16)
Undeclared job	3 (12)
Unemployed	2 (8)
Illegal activities	2 (8)

## Legal History and Detention Details

Crime, N (%)	
Against the property	11 (44)
Against the person	10 (40)
Drug dealing	4 (16)
Previous convictions, N (%)	
No	19 (76)
Yes, same offence	2 (8)
Yes, another offence	4 (16)
Months spent in prison, mean (Min, Max)	37 (1, 191)
Residual months to spend in prison, mean (Min, Max)	46 (2, 167)
Family members detained, mean (Min, Max)	1 (1, 5)
No	13 (52)
Yes	12 (58)
Disciplinary measures, N (%)	
No	23 (92)
Yes	2 (8)
Special surveillance, N (%)	
No	23 (92)
Yes	2 (8)

The most identified offences were the crimes against the property and the person. Most of prisoners were at their first conviction. The average of the total months already spent in prison was 37; the average of residual months' sentence was 46. Twelve inmates had other family members in jail, and only a little proportion had disciplinary measures or special surveillance (Table 2).

Inmates were asked to identify the primary cause of stress during their detention. They mostly attributed their stress to the distance from family and loved ones. Twelve inmates were not engaged in any activity, ten inmates were performing a laboratory, and two were working within the institution at the time of the interview. More than a half of women requested a supportive psychological therapy during their detention (Table 3).

Major causes of stress, N (%)	
Distance from loved ones	20 (80)
Lack of privacy	1 (4)
Forced cohabitation	4 (16)
Activities, N (%)	
No activities	12 (48)
Laboratory	10 (40)
Work	2 (12)
Request for psychological support, N (%)	
Yes	14 (56)
No	11 (44)

### State of Health

Table 4 describes inmates' general state of health. New internal pathologies arose in eleven cases, during the period of detention, while sixteen of them suffered from at least one internal pathology before their arrest. Sixteen were in menopause.

Most of them were used to smoke cigarettes. Nine inmates reported a positive psychiatric history before the detention: five of them suffered from depression, one from an anxiety disorder, one from anxious-depressive syndrome and one had previously attempted suicide. Nine women had used psychotropic drugs before their arrest.



Pre-detention internal pathologies, N (%)	
Yes	16 (64)
No	9 (36)
Post-detention internal pathologies, N (%)	
Yes	11 (44)
No	14 (56)
Pre-detention menstrual cycle, N (%)	
Regular	13 (52)
Irregular	3 (12)
Menopause	9 (36)
Menstrual cycle during the initial period spent in prison, N (%)	
Regular	5 (20)
Irregular	4 (16)
Menopause	16 (64)
Tobacco smoke	
No	10 (40)
1-10/die	3 (12)
10-20/die	7 (28)
>20/die	5 (20)
Pre-detention psychiatric disorders, N (%)	
Yes	9 (36)
No	16 (64)
Pre-detention psychotropic drug use, N (%)	
Yes	9 (36)
No	16 (64)

#### Current and lifetime psychiatric disorders

The MINI test suggested the presence of five cases of a current major depressive episode and six of lifetime depressive episode. One inmate had a medium rate of suicide risk, eight women reported having had panic attack symptoms during the last month, and twelve women say having had a panic attack episode in the first period of detention.

Four women have a current agoraphobic disorder, and the same frequency was detected for lifetime agoraphobia. One inmate reported having social anxiety disorder (SAD) symptoms.

Two inmates reported a positive history of drug abuse (mostly cannabis). One inmate had a current bulimic eating disorder (Table 5).

There were no cases of Generalized Anxiety Disorder, Current Hypomanic Episode, DOC, PDSO, Psychotic Disorders, Anorexia and Antisocial Personality Disorder (data not shown in table).

Table 5. MINI test results (N=25)	
Current major depressive episode, N (%)	
Yes	5 (20)
No	20 (80)
Lifetime major depressive episode, N (%)	
Yes	6 (24)
No	19 (76)
Suicide risk, N (%)	
Yes	1 (4)
No	24 (96)
Current panic disorder, N (%)	
Yes	8 (32)
No	17 (68)
Lifetime panic disorder, N (%)	
Yes	12 (48)
No	13 (52)
Current agoraphobia, N (%)	
Yes	4 (16)
No	21 (84)
Lifetime agoraphobia, N (%)	
Yes	4 (16)
No	21 (84)
Current social anxiety disorder (SAD) , N (%)	
Yes	1 (4)
No	24 (96)
Lifetime drug addiction, N (%)	
Yes	2 (8)
No	23 (92)
Current bulimia, N (%)	
Yes	1 (4)
No	24 (96)
Any current psychiatric disorder, N (%)	
Yes	11 (44)
No	14 (56)
Any lifetime psychiatric disorder, N (%)	
Yes	9 (36)
No	16 (64)

Legend: the table only reports frequencies of detected symptoms.

Ten prisoners were taking a psycho-pharmacotherapy at the time of the interview. Benzodiazepines were the most used drugs, followed by hypnotics and antidepressants. Two inmates received antipsychotics (Table 6). A total of six prisoners took more than one medication; four women were taking one medication only.

Psycho-pharmacotherapy, N (%)	N (%)
Yes	12 (48)
No	13 (52)
<b>Benzodiazepines, N (%)</b>	
Yes	7 (28)
No	18 (72)
<b>Hypnotics, N (%)</b>	
Yes	4 (16)
No	21 (84)
<b>Antidepressants, N (%)</b>	
Yes	4 (16)
No	21 (84)
<b>Mood stabilisers, N (%)</b>	
Yes	3 (12)
No	22 (88)
<b>Antipsychotics, N (%)</b>	
Yes	2 (8)
No	23 (92)

To summarise, eleven women presented one or more psychiatric diagnoses among those described in table 5: nine of them presented a history of any psychiatric disorder, and two of them were new cases: one with depression and one with both major depression and panic attack disorder.

#### Antecedents of Psychiatric Disorders

There were no differences in any sociodemographic characteristics between women who suffered from a current psychiatric disease and those who did not nor in general state of health variables, respectively described in table 1 and table 4. Five women with a psychiatric disorder were attending laboratories, and their proportion was equal among those without a current psychiatric diagnosis. There were no differences between those with current psychiatric disease and those

without in major causes of stress referred nor in the number of monthly visits received by family members.

About legal history, there were no differences in months spent in prison for the actual imprisonment and in total, nor in residual months between subjects with any current psychiatric disorder and those without. We did not find any differences in the type of crime committed and history of other detentions between these two groups of detainees.

We then repeated the abovementioned comparisons, when appropriate, after stratifying for the type of current psychiatric disorder. Women who have a current diagnosis of major depressive episode spent more months in prison for the current crime (Mann-Whitney U test  $p=0.042$ ) and in total (Mann-Whitney U test  $p=0.012$ ), and they had more residual months to spend in jail (Mann-Whitney U test  $p=0.019$ ) compared to those who do not have this diagnosis. Women with a current Panic Attack Disorder were more likely to have committed a crime against persons (ex- Fisher's test (2)=6.4,  $p=0.029$ ) and to have spent more total months in prison (Mann-Whitney U test  $p=0.049$ ). Disciplinary measures were adopted for the two prisoners with a current major depressive diagnosis and a history of illegal drug abuse.

**Psychiatric Disorders and request of psychological and pharmacological support**  
Ten women of those with a psychiatric disorder requested a clinical psychological interview, a higher proportion compared to those who did not suffer from any psychiatric disorder ( $n=4$ ) (ex-Fisher's test (1)=9.7,  $p=0.004$ ), and nine of them were under psychopharmacological treatment, while no-one of those without a diagnosis was taking medications (ex- Fisher's test (1)=17.8,  $p<0.001$ ).

## Discussion

Our sample had a mean age of 49 years ( $sd=9.36$ ) and resulted older than a 69 men sample recruited in a previous study conducted at Pagliarelli jail, whose mean age was 42.7 years ( $sd=10.9$ ), ( $t(92)=2.5$ ,  $p=0.013$ ), but equally distributed in terms of marital status (66% married women) as compared to the previous study (68% married men) (Schimmenti, Caprì, La Barbera, & Caretti, 2014).

The research found that eleven (44%) inmates presented a psychiatric disorder at the time of the interview, while nine had a history of past diagnosis. These percentages are higher than that expected in the general population, but they are lower than those found in previous studies on larger male samples (Macciò et al., 2015; Piselli et al., 2009). This result is also not consistent with that detected in an American sample by Lindquist & Lindquist (1997), who found significantly

higher levels of mental distress in females than in males detainee. The differences could be due to the small sample size, or they can suggest that women adapt in a better way to the close confinement, at least in this population. This lower percentage is even more if we consider that climacteric changes occurred during the period of imprisonment for most of them.

Anxious spectrum disorders and major depressive disorders were prevalent in inmates from Palermo, in line with Macciò et al. (2014); they were mostly present before the actual imprisonment at Pagliarelli jail but probably maintained thanks to a more extended period spent in prison, away from loved one people. No other variables predicted or were related to a current psychiatric disorder.

Other studies carried out in Italy investigated the presence of mental illness in the inmates using diagnostic tools other than the MINI: one of these was developed by Zoccali et al., (2008) at the District Court of Messina, using the Structured Clinical Interview SCID I and SCID II. The study involved 142 male inmates and detected the presence of psychiatric disorders in 85.2% of cases. Only 51.4% of them requested mental support during the period of their imprisonment, and we found a similar proportion in our study (56%), while in our population, almost the totality of women with a current psychiatric diagnosis asked for psychological support and took medications, especially benzodiazepines alone or in combination with other drugs.

#### Strengths and limitations

The study was conducted on a small sample. However, it represented the entire female population inmates with a final sentence at Pagliarelli jail and looked at some variables for the first time. Unfortunately, we do not have similar data on men from the same jail, a previous study detected 10% only of men with high scores in psychopathy traits (Schimmenti et al., 2014). The MINI is a reliable tool both in the general population (Faravelli et al., 2004) and in the prison population (Markowitz, 2011), but it investigates only the Antisocial Personality Disorder, typically associated with male criminal conduct, and not other Personality Disorders, e.g. Borderline Personality Disorder. Nevertheless, the instrument has a relatively short administration time and is therefore considered acceptable for the study participants (Amorim, Lecrubier, Weiller, Hergueta, & Sheehan, 1998).

### Conclusions

The study described the socio-demographic and psychopathological profile of the women detainee at Pagliarelli jail with a final sentence. We found that 44% of them have a psychiatric disorder, without any apparent antecedent among those explored, apart from a history of previous psychiatric disorders. They requested mental support during the period of imprisonment and took a psychopharmacological therapy. A longer time spent in prison was the only variable related to a diagnosis of a major depressive disorder.

These preliminary findings suggest the need to enlarge the sample to determine the characteristics that differentiate men from women in the adaptation to the custodial regime, to put in place all those strategies of protection and care necessary to preserve the psychophysical well-being of women living in prison.

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