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Psychiatric illness in incarcerated population

Il trattamento del malato di mente detenuto

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Abstract
The psychiatric incarcerated population has increased enormously in recent years. Most of them are homeless and suffering mainly from psychosis, often in comorbidity with substance abuse. Psychopathology, as well as the effect of substances or withdrawal, mediates the possibility of committing crimes again after release and their pathway in prison.
In this contribution, we will present possible treatments currently available in prison, both for psychopathology and detoxification from substances and alcohol, and their effectiveness. In addition, the characteristics of two particular populations, women and adolescents facing the prison experience, will be highlighted. Finally, an in-depth study on suicide and self-harming, transversal to psychiatric disease, gender or age, will propose both the size of the phenomenon and possible prevention or intervention options.

Key words: psychiatry • incarcerated population • women, adolescents • dual diagnosis

Riassunto
La popolazione psichiatrica in carcere é aumentata in modo imponente negli ultimi anni. La maggior parte di loro risulta senza fissa dimora ed affetta da psicosi, spesso in comorbiditá con abuso di sostanze. La psicopatologia, cosi come l'effetto delle sostanze o l'astinenza dalle stesse, mediano la possibilitá di commettere nuovamente crimini dopo il rilascio ed il percorso carcerario.
In questo contributo verranno presentati i possibili trattamenti attualmente disponibili in ambito carcerario, sia per psicopatologia che per detossificazione da sostanze ed alcool, ed efficacia degli stessi. Inoltre si evidenziano le particolaritá di due popolazioni particolari, ovvero donne ed adolescenti che affrontano la dimensione carceraria. In ultimo, un approfondimento rispetto al fenomeno del suicidio e dell'autolesivitá, trasversali rispetto alla patologia psichiatrica, al genere o all'etá proporrá sia le dimensioni che le possibili opzioni preventive o di intervento.

Parole chiave: psichiatria • popolazione carceraria • donne • adolescenti • doppia diagnosi

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Introduction

There are more than 10 million individuals in prison at any given time with more than 30 million circulating through each year (Fazel & Baillargeon, 2011).

Prisoners show higher rates of psychiatric disorders and researches highlight that in some countries there are more people with severe mental illness in prisons than psychiatric hospitals.

Generally speaking, risk factors for incarceration included prior incarcerations; co-occurring substance-related diagnoses; homelessness; schizophrenia, bipolar, or other psychotic disorder diagnoses; male gender; no medical insurance (e.g MedicAid); and belonging to a cultural minority. Risk factors for reincarceration included co-occurring substance-related diagnoses; prior incarceration; diagnosed schizophrenia or bipolar disorder; homelessness; and incarceration for three or fewer days (Hawthorne et al., 2012).

The seriousness of the problem and the proportion of psychiatric patients that contributes to incarcerated sample, require an in-depth evaluation.

1. Psychiatric patients and incarceration

Mentally ill patients are entering the criminal justice system at alarming rates, representing a significant percentage of those incarcerated (Collins, Avondoglio, & Terry, 2017). Persons with mental illness and co-occurring substance abuse disorders are incarcerated a disproportionately high rates in comparison to the general population (Rock, 2001). Diagnoses were predominantly in the schizophrenia spectrum with 70% also actively abusing substances at the time of incarceration (Munetz, Grande, & Chambers, 2001).

Nearly two thirds (65.0%) of inmates had a DSM-IV Axis I or Axis II disorder. Personality disorders were the most common disorders (51.9%), followed by anxiety (25.3%) and substance use disorders (24.9%). Over one third of inmates (36.6%) had comorbid types of disorder. The most common comorbid types of disorders were substance use disorders plus personality disorders (20.1%) and anxiety disorders plus personality disorders (18.0%) (Chen et al., 1999; Piselli et al., 2015).

People affected by mental illness who commit a crime might face incarceration or admission into the forensic psychiatric circuit. Persons affected by severe mental illness who are incarcerated (I-SMI) have less schooling; they more often reported suicide attempts and violent and non-violent crimes; and they had a higher level of comorbidity involving Cluster B personality disorders and substance-use disorders. Forensic-hospitalized SMI persons were more likely to have been receiving psychiatric follow-up before hospitalization. Lifetime suicide attempts, non-violent crimes, and psychopathic traits were higher among I-SMI individuals than among forensic-hospitalized SMI individuals. In contrast, receiving regular psychiatric follow-up was associated with forensic-hospitalized SMI individuals (Dumais, Cote, Larue, Goulet, & Pelletier, 2014).

Former inmates had a greater mean number of previous hospital stays than other patients ($t = -2.13$; $df = 305$; $p = 0.03$) and were more likely to visit the emergency room or be re-hospitalized within 3 months of discharge (Prince, 2006).

Psychiatric illnesses show different connotation among general inpatients, forensic and incarcerated patients. For example, compared to schizophrenics, forensic schizophrenics are more severely clinically impaired, showing higher rates of comorbid alcohol and substance disorder, more suicide attempts, had more previous hospitalizations, and were younger at disease onset (Landgraf, Blumenauer, Osterheider, & Eisenbarth, 2013).

Furthermore, psychiatric pathologies seem to mediate the type of offence. It is illustrative the relevance that the rate of sexual crimes among individuals with schizophrenia is relatively low. Studies indicate significant differences distinguishing schizophrenia sex offenders from schizophrenia non-sex offenders, the former of whom were more likely to be married, employed, non-heterosexual (homosexual and bisexual orientations) and demonstrated less hospitalization, antisocial personality, substance abuse, negative symptoms and overall illness severity (Alish et al., 2007).

An appropriate psychiatric follow up seems effective in reducing psychiatric relapses as well as reincarceration. In fact, patients whose first service after release from incarceration was outpatient or case management were less likely to receive subsequent emergency services or to be reincarcerated within 90 days.(Hawthorne et al., 2012)

Mentally disordered offenders produced criminal thinking scores on the Psychological Inventory of Criminal Thinking Styles (PICTS) and Criminal Sentiments Scale-Modified (CSS-M) similar to that of non-mentally ill offenders. Collectively, results indicated the clinical presentation of mentally disordered offenders is similar to that of psychiatric patients and criminals (Morgan, Fisher, Duan, Mandracchia, & Murray, 2010).

Treatment options might be reduced in the prison context (Ehret et al., 2013). Fazel and collegues (Fazel, Hayes, Bartellas, Clerici, & Trestman, 2016) highlighted that the number of medication trials conducted in prisons is particularly low. They detected some studies on ADHD medications that showed an improved global functioning and increased likelihood of abstinence from amphetamine after release. Similarly, controlled trials on psychological therapies in prisoners are more than those on medications, but are typically small and involve a wide variety of interventions (e.g., cognitive behavioral [CBT], interpersonal, dialectical behavioural [DBT], meditation- based, and group therapies) with inconsistent findings.

2. Dual diagnosis

Dual diagnosis, that is by definition the "condition of suffering from a mental illness and a comorbid substance abuse problem", is frequently reported among inmates. Substance and alcohol dependence is high among incarcerates with a general prevalence of about 56% for alcohol dependence, 49% for opiate dependence and 61% for cocaine dependence (Lewis, 2011).

People with co-occurring disorders have the most substantial criminal histories and the highest rates of institutional charges, transfers to segregation while incarcerated, and reconvictions.

Moreover, having a substance use disorder appeared to be the key factor contributing to poorer correctional outcomes for offenders with mental disorders (Wilton & Stewart, 2017).

Seventy-eight percent of the homeless inmates with a severe mental disorder had co-occurring substance-related disorders. Inmates with dual diagnoses were more likely to be homeless and to be charged with violent crimes than other inmates (McNiel, Binder, & Robinson, 2005). 30% of the inmates who were homeless had a diagnosis of a mental disorder during one or more episodes (McNiel et al., 2005).

Some protective factors seems linked to a reduction of reincarceration rate in addicted prisoners. Two factors, in particular, are associated with a reduced likelihood of incarceration: friendships with individuals who did not use substances (OR=.19) and substance use treatment engagement (OR=.60) (Luciano et al., 2014)

Furthermore, drug-involved prisoners exhibit more health problems and greater rates of chronic health problems than prisoners who have not used drugs (Leukefeld et al., 2002).

Detoxification might be problematic within the prison context and the provision of such treatment services is variable. Alcohol and opiates are the two most common and problematic substances for detoxification management in prisons. A poor offering of such treatment might imply serious adverse outcomes, for example the management of withdrawal. It has been attested that only 34% of US jails offer any detoxification treatment (Oser, Knudsen, Staton-Tindall, Taxman, & Leukefeld, 2009), implying that about one million arrestees annually are at risk of untreated withdrawal from alcohol, including delirium tremens and its associated high mortality(Hasin, Stinson, Ogburn, & Grant, 2007).

Opiate substitution and CBT-based relapse prevention therapies should be made available to all prisoners. Evidence support their efficacy and long lasting effects after release.

The management of opiate withdrawal in prison is generally symptomatic, and mostly based on detoxification rather than maintenance. Some systematic review (Duthe, Hazard, Kensey, & Shon, 2013)confirm the efficacy in reducing withdrawal severity using long-acting opioids (Amato et al., 2013). Further evidence highlighted an equivalent clinical effectiveness for detoxification between methadone and buprenorphine (Leeds Evaluation of Efficacy of Detoxification Study –LEEDS). A further study compared dihydrocodeine and buprenorphine demonstrating comparable effectiveness for acute opiate detoxification (Sheard et al., 2009). On the basis of this evidence, all prisoners should be offered acute detoxification on arrival.

Many psychological treatments for substance misuse are available, some of them analyzed on a prison-based [therapeutic communities (TC), CBT, and motivational interviewing (MI)]. In particular, if followed by aftercare in the community most effective at reducing relapse and re-incarceration (Mitchell O, 2007). MI is esteemed the best evidence-based treatment for alcohol misuse.

A variety of CBT-based therapies studied in prison populations with substance misuse demonstrate effectiveness compared to drug and alcohol education or no treatment.

Furthermore, other treatment demonstrated reductions in recidivism, for example Reasoning and Rehabilitation (R&R), a 35-session CBT program focusingon prosocial attitudes, emotion regulation and self-control, and interpersonal problem solving (Tong LSJ, 2006).

There is also good evidence for the medication assisted therapy (MAT), which combines pharmacological treatments (including methadone, buprenorphine and naltrexone) and psychological approaches. Studies showed significant positive outcomes of MAT on reoffending (d=0.47) and drug use (d=0.38) (Koehler JA, 2014).

Methadone maintenance therapy (MMT) has been implemented in many countries. MMT decreases heroin use and enhances treatment retention compared to non-pharmacologic treatments (Mattick, Breen, Kimber, & Davoli, 2009).

Starting methadone prior to release is significantly more effective for treatment retention, reduced drug use, and reduced reoffending than either counselling alone or simple referral to MMT upon release (Kinlock, Gordon, Schwartz, Fitzgerald, & O'Grady, 2009; Rich et al., 2015).

A number of program evaluations have demonstrated reduction in opiate use following release when individuals were started during incarceration (Gordon et al., 2014; Magura et al., 2009). Some RCT evidence supports the use of intramuscular naltrexone as an alternative to methadone (Lobmaier, Kunoe, Gossop, Katevoll, & Waal, 2010).

3. Adolescents

Adolescence is a key but potentially fragile period of life that might require special attention. Most of the psychiatric disorders have their onset during adolescence and delinquent behaviors, often influenced by peers, start to be displayed (Margari et al, 2015).

Almost half (43.6%) of hospitalized adolescents have a history of juvenile justice involvement. Significant predictors of juvenile justice involvement included being male, parental legal history, family substance abuse history, disruptive disorder, cocaine use, being sexually active, and having a history of aggressive behavior (Cropsey, Weaver, & Dupre, 2008).

Substance and alcohol abuse play an important role, both as a component of peer association in delinquency and an incentive to commit crimes in order to obtaining substances.

Due to age characteristics, dependence, its treatment and crime are mediated accordingly. For example, adolescents use significantly less inhalants than nonminority (McGarvey, Canterbury, & Waite, 1996)

Psychopathology influences and modulates substance

abuse. Indeed, incarcerated adolescents showing a negative mood report higher levels of alcohol use, higher levels of use-related consequences for both alcohol and marijuana, greater use of both substances to regulate mood states, and more use of avoidant coping (Turner, Larimer, Sarason, & Trupin, 2005)

Some therapies have been applied for the treatment of addicted incarcerated adolescents. Among those, motivational interviewing demonstrated the best efficacy in adolescents incarcerated for driving while intoxicated with lower rates of re-offence (Stein et al., 2006).

4. Women

Women are considered a special population deserving greater attention. Psychopathologies are, in general, gender mediated and their presentation or characteristics vary accordingly (Catanesi, Carabellese, La Tegola & Alfarano, 2013; Carabellese et al, 2015).

Incarcerated women have higher rates of depression than both community samples and incarcerated men (Gunter, 2004). Women prisoners show an higher risk of suicide compared to male prisoners (with relative risks typically more than 6 compared to the general population).

Forty-three percent of participants met lifetime criteria for a serious mental illness, and 32% met 12-month criteria; among the latter, 45% endorsed severe functional impairment. Fifty-three percent met criteria for ever having posttraumatic stress disorder (PTSD). Almost one in three (29%) met criteria for a serious mental illness and PTSD, 38% for a serious mental illness and a co-occurring substance use disorder, and about one in four (26%) for all three in their lifetime (Lynch et al., 2014).

The severity of borderline personality disorder (BPD) and antisocial personality disorder (ASPD) both were associated with drug dependence, but BPD was not associated with alcohol dependence. After controlling for ASPD severity, BPD severity was no longer associated with drug dependence. None of the BPD features was uniquely associated with alcohol or drug dependence after controlling for ASPD. A co-occurring BPD diagnosis was associated with mood disturbance and experiential avoidance among substance-dependent participants. An ASPD diagnosis was associated with an earlier age at first arrest, along with greater childhood abuse and severity of alcohol dependence (Chapman & Cellucci, 2007).

Female inmates have a greater treatment need, yet most inmates do not participate in treatment while incarcerated. Females were significantly more likely to participate in prison drug treatment than males, but severity of drug problems predicted participation in treatment, as for males. For males but not females, race was associated with prison treatment participation, and among those with drug abuse or dependence, females with co-occurring mental health problems were more likely to participate in treatment (Belenko & Houser, 2012).

Providers described optimal aftercare for women as including contact with the same provider before and after release, access to services within 24-72 hours after release, assistance with managing multiple social service agencies, assistance with relationship issues, and long-term follow-up (Johnson et al., 2015).

Findings suggest that there are aspects of incarcerated addicted with major depression women's social networks that are amenable to change during incarceration and post-release and provide insight into treatment targets for this vulnerable population (Nargiso, Kuo, Zlotnick, & Johnson, 2014).

5. Suicide and Self-harm

Suicide and self-harm are more common in prisoners than community-based persons of similar age and gender (Fazel et al., 2016). The relative risks of suicide in male prisoners is around 3-6 compared to the general population, with a higher risk in women prisoners (relative risk typically more than 6).

Of the suicide victims with some mental health contact, 95% had a substance abuse history, 70% displayed agitation or anxiety prior to the suicide, and 48% had a behavioral change. Common stressors preceding the suicide were inmate-to-inmate conflict (50%), recent disciplinary action (42%), fear (40%), physical illness (42%), and adverse information (65%) such as loss of good time or disruption of family/friendship relationships in the community. Forty-one percent had received a mental health service within 3 days of the suicide (Way, Miraglia, Sawyer, Beer, & Eddy, 2005).

An elevated risk of suicide was observed among inmates with major depressive disorder (relative risk [RR] = 5.1, 95% confidence interval [CI] = 1.9-13.8), bipolar disorder (RR = 4.6, CI = 1.3-15.9), and schizophrenia (RR =7.3, CI = 1.7-15.9). The highest overall risk was present in those inmates with a nonschizophrenic psychotic disorder (RR = 13.8, CI = 5.8-32.9) (Baillargeon et al., 2009).

The relative risk shows important differences between countries (from reported suicide rate of 179 per 100,000 prisoners in France, whereas most countries report around 100-150 per 100,000). Interestingly, another outlier is the US where suicide rates in local jails are 41 per 100,000, and in state prisons 16 per 100,000, 80 per 100,000 in U.S. local jails and 25 per 100,000 in U.S. state prisons, but no clear explanation have been identified and no correlations with incarceration rates or general population suicide rates have been detected (Fazel, Grann, Kling, & Hawton, 2011; Statistics., 2015). A possible explanation may root in a difficulty in identification due to misclassification of suicides as accidents, unknown or natural deaths, and reluctance in some countries to characterize self-inflicted deaths in custody as suicides. These reasons led Fazel and colleagues to suggest that all-cause mortality in prison may be a better proxy than official suicide rates for international comparisons when including countries where suicide reporting in prisons has not been validated.

Contextually, analysis of self-harming in prison is appropriate. It is an important cause of morbidity, but studies focused on this issue are less than those on suicide.

A recent epidemiological study in English and Welsh prisons found that in the previous 12 months in custody, 5-6% of men and 20-24% of women self-harmed. Risk factors include younger age and short sentences, and there is evidence that self-harm clusters in certain prison settings. (Hawton, Linsell, Adeniji, Sariaslan, & Fazel, 2014) Near-

lethal self-harm has been shown to be a valid proxy for completed suicide in prison.

In terms of interventions for the management of suicide and self-harming prison, the studies have indicated the importance of adequate screening for suicide risk with comprehensive care planning based on identified risk on arrival to prison. Several guidelines for suicide prevention have recommended early screening of prisoners at first reception to custody, actions taken in response to positive screening, and ongoing risk monitoring (Konrad et al., 2007). Moreover, multidisciplinary information sharing and decision-making are emphasized along with appropriate mental health treatment. Another recommended intervention has been training of suicide risk assessment and management, often focusing on communication skills. Staff training and environmental safety (e.g., removal of potential risks such as ligature suspension points) are highly recommended.

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