Aggression, Impulsivity, Personality Traits, and Childhood Trauma of Prisoners with Substance Abuse and Addiction

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Abstract: Introduction: The aim of our study is then to analyze psychological and judicial features of a subgroup of inmates with substance abuse. Methods: Prisoners with substance abuse (n=312) were compared to prisoners without substance abuse (n=591). Recruited inmates completed a semistructured interview for collection of sociodemographic and judicial data and a battery of psychometric tests for assessment of aggression, impulsivity, depression, personality traits, hostility, resilience, and childhood trauma. Results: Substance abusers had on average multiple incarcerations (78.8%), more juvenile convictions (60.2%), more violent behaviors during detention (29.8%), and a history of one or more suicide attempts (20.8%). They also had higher scores on subscales for childhood trauma, higher scores for psychoticism and neuroticism, higher impulsivity levels, worse resilience, increased hostility, and prevalent suicidal ideation. Conclusion: Prisoners with substance abuse constitute a subgroup with increased judiciary and psychiatric issues, possibly due to early life history and psychological characteristics, such as high impulsivity and aggressiveness, poor resilience, and higher suicidal risk.

Keywords: Addiction, aggression, childhood trauma, impulsivity, prisoners, resilience, substance abuse, suicide

INTRODUCTION

Substance abuse and addiction have been serious concerns among the prison population worldwide. In the United States federal prisons, drug-related...
Table 1. Psychopathological and judicial characteristics of the sample

<table>
<thead>
<tr>
<th></th>
<th>Substance Abusers (n=312)</th>
<th>Non-Substance Abusers (n=591)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean ± SD</td>
<td>Mean ± SD</td>
<td></td>
</tr>
<tr>
<td>Multiple incarcerations</td>
<td>78.8% ± .41</td>
<td>60.2% ± .49</td>
<td>p &lt; .01</td>
</tr>
<tr>
<td>Juvenile convictions</td>
<td>60.2% ± .49</td>
<td>21.5% ± .41</td>
<td>p &lt; .01</td>
</tr>
<tr>
<td>Violent behaviors</td>
<td>29.8% ± .46</td>
<td>18.6% ± .39</td>
<td>p &lt; .01</td>
</tr>
<tr>
<td>Violent crime</td>
<td>24.7% ± .43</td>
<td>31.6% ± .47</td>
<td>p &lt; .01</td>
</tr>
<tr>
<td>History of one or more</td>
<td>20.8% ± .41</td>
<td>11.2% ± .32</td>
<td>p &lt; .01</td>
</tr>
<tr>
<td>suicide attempts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CTQ total score</td>
<td>8.30 ± 2.90</td>
<td>8.01 ± 2.48</td>
<td>NS</td>
</tr>
<tr>
<td>CTQ-EA</td>
<td>7.68 ± 3.93</td>
<td>7.12 ± 3.32</td>
<td>p &lt; .01</td>
</tr>
<tr>
<td>CTQ-PN</td>
<td>13.23 ± 5.20</td>
<td>12.60 ± 4.62</td>
<td>p &lt; .01</td>
</tr>
<tr>
<td>P</td>
<td>12.60 ± 4.62</td>
<td>5.11 ± 2.78</td>
<td>p &lt; .01</td>
</tr>
<tr>
<td>E</td>
<td>13.48 ± 3.99</td>
<td>1316 ± 3.99</td>
<td>NS</td>
</tr>
<tr>
<td>N</td>
<td>12.46 ± 5.09</td>
<td>11.06 ± 5.04</td>
<td>p &lt; .01</td>
</tr>
<tr>
<td>BIS</td>
<td>50.12 ± 14.57</td>
<td>45.60 ± 14.96</td>
<td>p &lt; .01</td>
</tr>
<tr>
<td>BGLHA</td>
<td>38.99 ± 10.74</td>
<td>33.89 ± 10.61</td>
<td>p &lt; .01</td>
</tr>
<tr>
<td>CDRISC</td>
<td>60.82 ± 13.80</td>
<td>65.46 ± 13.65</td>
<td>NS</td>
</tr>
<tr>
<td>BDHI</td>
<td>40.27 ± 10.41</td>
<td>34.01 ± 11.00</td>
<td>p &lt; .01</td>
</tr>
<tr>
<td>Suicidal Ideation</td>
<td>57.1 ± .50</td>
<td>36.7 ± .48</td>
<td>p &lt; .01</td>
</tr>
</tbody>
</table>

Offenses in 2006 accounted for 93,751 convictions on a total of 176,268, with an increasing trend since 2003, in comparison to other offenses (1, 2). Those who are convicted for drug-related offenses are mostly drug abusers and addicts themselves, as they frequently offend with the aim of funding the habit (3). Drug abusers and addicts are a population with complex medical and mental health needs, with an increased use of health services within the correctional system and consequence rise in health expenses. Furthermore, drug abusers and addicts carry behavioral problems in a prison environment. They have greater psychiatric comorbidity which exacerbates during detention due to forced abstinence, sub-optimal pharmacological detoxification and treatment, and stressful impact of the prison experience (4–6). Specific management of prisoners with substance-related disorders could be required in order to reduce the additional burden in terms of health, economic, and human resources employed in prisons for such inmates (7, 8). Characterization of prisoners in respect to levels of aggression, impulsivity, presence of childhood trauma of inmates with substance abuse can be therefore helpful in developing directions and guidelines specifically addressed to the management of prisoners with drug-related disorders; the aim of our study is then to analyze psychological and judicial features of a subgroup of inmates with substance abuse.
SUBJECTS AND METHODS

We studied a consecutive series of 903 male prisoners detained in five jails in the penitentiary district of Abruzzo and Molise, Italy. Both low and high security correctional facilities participated in the study. The study was approved by the ethical committee of the University of Molise.

Inclusion criteria were that the prisoner was willing to participate in the study and signed a written informed consent, after an extensive oral description of the study to the prisoners. Exclusion criteria were the inability to speak or read Italian, mental retardation, or florid psychosis. Only male prisoners were included in the sample, as female prisoners were scarcely represented.

Of a total of 903 inmates, 312 substance abusers (34.55%) were selected, on the basis of the Mini International Neuropsychiatric Interview (MINI) (9). 162 subjects had a comorbid psychiatric disorder (17.94% of the whole sample). 579 subjects (64.11%) were diagnosed with a psychiatric disorder on the I axis, according to DSM-IV criteria (American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. Fourth Edition (DSM-IV). Washington, D.C., 1994). Mean age of inmates was 37.29 ± 9.37 years.

Inmates recruited underwent an in-depth psychiatric interview by specifically trained psychologists or psychiatrists. The interview included administration of the Italian version of the structured MINI interview (9) and a semistructured interview enquiring for socio-demographic variables, lifetime, and family history of suicide, including suicidal ideation.

Prisoners also completed the Brown–Goodwin Assessment for Lifetime History of Aggression (BGLHA) interview (10, 11) for assessing prisoner's aggression history and the Hamilton Depression Rating Scale (HDRS) for assessing presence and levels of depression (12); the Childhood Trauma Questionnaire (CTQ)—34-item version of Bernstein et al. (13, 14), the Eysenck Personality Questionnaire (EPQ) (15), the Barratt Impulsivity Scale (BIS) (16), and the Connor-Davidson Resilience Scale (CD-RISC) (17). The CTQ yields scores for childhood emotional abuse, physical abuse, sexual abuse, physical neglect, emotional neglect, as well as a weighted total score. The EPQ yields scores for neuroticism, psychoticism, and extraversion. After the psychiatric interview the prisoner's prison file was examined. Data were recorded about the nature of the crime for which the prisoner was convicted, the presence of past convictions, about any convictions as a minor (under 18), and about disciplinary reports of aggressive behavior while inside the prison. Violent crimes included homicide, aggression with guns or other weapons, terrorist activity; nonviolent crimes included drug use or sale, nonviolent robberies, and fraud.
Statistical Analysis

Statistical Analysis was conducted using SPSS for Windows, Release 15.0 (2007). In the statistical analysis, subjects were divided into two groups depending on whether or not they had a substance-related disorder according to the MINI criteria. Between-group differences were examined using \( \chi^2 \) analysis for categorical variables and t tests for continuous variables.

RESULTS

Substance abuser prisoners (n=312) were compared to prisoners without substance abuse (n=591). Psychopathological and judicial characteristics of the sample are shown in Table 1. 78.8% ± .41 of substance abuse inmates had more than one incarceration, with a statistically significant difference (p < .01) compared to the whole sample (60.2% ± .49). Substance abusers had also more juvenile convictions (60.2% ± .49 vs. 21.5% ± .41), more violent behaviors during detention (29.8% ± .46 vs. 18.6% ± .39), and on average were not sentenced for violent crimes (24.7% ± .43 vs. 31.6% ± .47) in comparison with the whole sample of inmates (p < .01). As regarding suicide attempts, inmates with substance abuse more frequently had a history of one or more suicide attempts (20.8% ± .41 vs. 11.2% ± .32, p < .01).

No statistically significant differences on the CTQ total scores resulted between the whole sample and the substance abusers subsample. However, statistically significant differences showed on specific subscales: namely, substance abusers had on average higher scores on the Emotional Abuse (7.68 ± 3.93 vs. 7.12 ± 3.32, p < .01) and Physical Neglect subscales (13.23 ± 5.20 vs. 12.60 ± 4.62, p < .01). Besides, statistically significant differences were not detected on the Physical Abuse, Sexual Abuse, and Emotional Neglect subscales.

On the Eysenck Inventory, the Substance Abuse subsample had on average higher scores both for Psychoticism (6.16 ± 3.07 vs. 5.11 ± 2.78 of the whole sample, p < .01) and for Neuroticism (12.46 ± 5.09 vs. 11.06 ± 5.04, p < .01).

On the BIS, impulsivity levels resulted to be higher, in a statistically significant fashion (p < .01), among substance abusers compared to the whole sample (50.12 ± 14.57 vs. 45.60 ± 14.96, p < .01).

On the BGLHA interview, substance abusers had on average higher scores in respect to all inmates (38.99 ± 10.74 vs. 33.89 ± 10.61, p < .01). On the CD-RISC scale, inmates with substance abuse showed worse resilience levels compared to all inmates (60.82 ± 13.80 vs. 65.46 ± 13.65, p < .01).

Suicidal ideation was present at the time of interview in 57.1% ± .50 of substance abusers, thus resulting preeminent in this group of inmates with a statistically significant difference (p < .01) compared to the whole sample.
On the Buss-Durkee Hostility Inventory (BDHI), substance abusers resulted on average in higher scores compared to the whole sample (40.27 ± 10.41 vs. 34.01 ± 11.00, p < .01).

DISCUSSION

Results show that substance abusers among all inmates constitute a subgroup with increased judiciary and psychiatric issues. From our data, in fact substance abusers carry on average a heavier criminal carrier, often reporting a history of multiple convictions since minor age and comprehensively cumulating numerous convictions. Although crimes for which they were convicted and serving their sentence were not classified as violent, substance abuse prisoners had violent attitudes during incarceration, reporting more aggressive behaviors compared to all inmates, and confirming the psychometric data of increased levels of hostility, lifetime aggression, and impulsiveness (18). While analyzing history of trauma since childhood through scores on the CTQ, statistically significant differences did not result on the total scores, but showed only on 2 subscales, namely, Emotional Abuse and Physical Neglect. Therefore, it can be suggested that those who became substance abusers and criminals, in childhood had received psychological maltreatments, and were often left alone, as it results from their personal report. On the contrary, they did not report more frequently than all prisoners other kind of traumatic experience such as physical and sexual abuse and emotional neglect, suggesting that these last maltreatments are more common and less distinguishing among prisoners, irrespective of their being a substance abuser (19).

As resulting from the Eysenck Personality Inventory, prisoners with substance abuse showed higher level of both psychoticism and neuroticism: this data concur with the evidence of a greater psychiatric comorbidity along with substance abuse, which spans in a large range from psychotic to neurotic spectra, and also from axis I to II of DSM-IV.

Substance abusers were also more impulsive in respect to the whole sample, as measured by the BIS, and showed more antisocial tendencies, ensuing from higher scores at the BGLHA, a questionnaire which collects history of many indicative behaviors from the minor age. Impulsiveness could play a role in acting violent behaviors during detention—which could also be held by greater levels of hostility—and in reiterating offenses, which in turn lead to multiple incarcerations. Increased levels of recidivism could possibly be one of the outcomes of poor resilience skills as exhibited by inmates with substance abuse. Low resilience levels were consistently shown to be decreased in abstinent substance dependent patients who had attempted suicide compared to abstinent patients without suicide attempt in a previous paper by the authors (20). Substance related disorders, from misuse to abuse to addiction, are difficult to treat, irrespective of the severity of dysfunction deriving from the habit.
It is far more difficult to perform an effective treatment plan in prison which is a highly stressful environment, where withdrawal is forced, and both pharmacological care and rehabilitation are limited in comparison to community levels of care. Beyond environmental limitations, also personality features, such as a low resilience and psychotic or neurotic characteristics, can play a role in relapses into the disorder or abuse, and in correlated crimes, thus contributing to higher levels of recidivism.

Substance abuser inmates finally constitute a group at increased risk for suicidal acts, either for a positive history of one or more suicide attempts, which is more frequently found among substance abusers, and the prevalence of suicidal ideation at the moment of the interview. This data are consistent with findings by A. Roy (21), who studied characteristics of drug addicts who had attempted suicide, and found higher levels of neuroticism and introversion, childhood trauma, psychoticism. It was then suggested that social, personality, family, developmental, and psychiatric risk factors may predispose to suicidal behavior in drug-dependent individuals, which carry per se a heavy psychiatric burden. Incarceration may finally add to preexisting risk factors and precipitate self-destructing behaviors.

In conclusion, substance abusers constitute a subgroup of prisoners with increased behavioral problems due to psychological characteristics, early life history of subjects, and tendency to relapse into the habit and reiterate crimes. Detoxification and rehabilitation have also proved to be harder in a prison environment, so specific treatment plans should be developed to address peculiar problems of the substance abuse subgroup of inmates, taking into account psychopathological features of the sample such high impulsivity and aggressiveness, poor resilience, and higher suicidal risk.

REFERENCES