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Abstract

There is evidence that psychiatric patients with psychotic or manic disorders who are incarcerated suffer from the same symptoms as psychiatric patients who are treated in the community. There are also indications that their symptoms might be more severe. The aim of this study was to examine the severity of psychotic and manic symptoms, as well as to collect information about the emotional functioning of patients admitted to a prison psychiatric ward. Incarcerated patients with a diagnosis of psychotic or a manic disorder were examined with the Brief Psychiatric Rating Scale–Expanded (BPRS-E). With the scores of 140 assessments, a symptom profile was created using the domains of the BPRS-E. This profile was compared with the clinical profile of three nonincarcerated patient groups described in literature with a diagnosis in the same spectrum. We found high scores on positive and manic psychotic symptoms and hostility, and low scores on guilt, depression, and negative symptoms. High scores on manic and psychotic symptoms are often accompanied by violent behavior. Low scores on guilt, depression, and negative symptoms could be indicative of externalizing coping skills. These characteristics could complicate treatment in the community and warrant further research along with clinical consideration.

Keywords

incarcerated psychiatric patients, violence, prison

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Introduction

Background

The prevalence of individuals with a severe psychiatric disorder, such as schizophrenia, schizoaffective disorder, or other diagnoses in the psychotic or manic spectrum, is 5 to 10 times higher in prison populations than in the general population (Brugha et al., 2005; Dressing & Salize, 2009; Fazel, Långström, Hjern, Grann, & Lichtenstein, 2009; Fazel & Seewald, 2012).

Much research has been conducted to identify the factors that cause individuals with severe psychiatric disorders to commit crimes. Socioeconomic circumstances, migration, and substance abuse are, among others, important factors (Fazel et al., 2009; Morgan, Charalambides, Hutchinson, & Murray, 2010). However, especially in the explanation of violent crimes, the symptoms of the disorder itself are relevant as well. For example, the risk of homicide is twofold in patients with schizophrenia compared with the general population (Richard-Devantoy et al., 2013). Psychotic symptoms like paranoid delusions (Coid et al., 2013; Kampman & Lehtinen, 1999; Lecomte et al., 2008), formal thought disorder (Amore et al., 2008), and manic symptoms (Volavka, 2013) are strongly related to aggressive behavior.

The likelihood that individuals with a severe psychiatric disorder receive adequate treatment in prison is lower than in the community (Keers, Ullrich, Destavola, & Coid, 2014). In addition, the more severe symptoms are and the longer they are not treated, the higher the risk of recidivism and violence (Baillargeon, Binswanger, Penn, Williams, & Murray, 2009; Lamberti, 2007). Diversion programs have proven to be effective (Scott, McGilloway, Dempster, Browne, & Donnelly, 2013). However, the majority of people with a severe psychiatric disorder never enroll. Partly this is because many individuals who need psychiatric care are not detected by prison health services (Brugha et al., 2005). Moreover, it is difficult to place individuals in treatment programs as an alternative to a prison sentence because there are legal restrictions to impose treatment on someone without their consent. Also, there are eligibility issues when new crimes are committed, or people abscond (Broner, Mayrl, & Landsberg, 2005). Persons with a psychiatric disorder are especially vulnerable to become victims of violence and abuse in prison, which further decreases the chance of successful rehabilitation (Blitz, Wolff, & Shi, 2008). This problem has been recognized all over the world, which has prompted a widespread effort to make the transition possible from prison into professional psychiatric care. There is evidence that the individuals with severe mental illness, now receiving psychiatric care in prison, cannot be effectively treated and/or managed in the community (Lamb & Weinberger, 2005). They are known to have histories of violent behavior and substance abuse (Lamb & Weinberger, 2011).

A well-designed and thorough study into the symptoms of individuals with psychosis in prison showed that they suffer from the same psychotic symptoms as people with psychoses in the community (Brugha et al., 2005). However, several research reports indicate that the symptoms of those who are incarcerated might be more severe, in

many cases so severe that hospitalization or 24-hr structured care is needed (Baillargeon et al., 2009; Lamb & Weinberger, 2005). At the same time, we know that those psychiatric patients who become criminalized are less inclined to seek treatment and are not as adherent to treatment as patients who never enter the criminal justice system (Brugha et al., 2005; Lamberti & Weisman, 2004). This can partly be explained by the fact that the available treatments do not correspond with the needs of these patients. Also, there is evidence that health services are not accessible enough for these patients (Lamb & Weinberger, 2011; White & Whiteford, 2006).

However, treatment nonadherence and avoidance of care are also associated with symptoms of psychiatric disorders itself. More severe positive symptoms predict treatment nonadherence. So in addition to the Brugha (2005) paper, the aim of our study was to examine the severity of symptoms. Also, we examined negative symptoms and affective symptoms. Affective symptoms are closely related to neuroticism. Neuroticism is the tendency to experience negative emotions such as sadness or anxiety as well as mood swings, and it is closely related to ego-strength (Hyde, 2001). The absence of neuroticism is thought not only to describe the inability to experience and reflect on negative emotions but also to restrain them. This was of special interest to us as low neuroticism predicts poor service engagement in individuals with psychoses in the community (Lecomte et al., 2008). Moreover, research shows that low neuroticism is related to violent behavior and offending (Presniak, Olson, & Macgregor, 2010; Yakeley & Meloy, 2012). It is thought that an interaction between this kind of emotional functioning and psychotic and manic symptoms enhances the risk of violence in community patients with mania and psychoses (Amore et al., 2008; Richard-Devantoy et al., 2013; Volavka, 2013). As far as we know, no studies have been conducted examining the experience of negative emotions in patients with severe psychiatric problems in prison. However, we would expect that the factors that enhance the risk of violent crime are more prevalent in individuals with severe psychiatric disorders in prison than in those treated by community services.

Aim

The goal of this study is to contribute to the knowledge of the symptoms of individuals with severe psychiatric illnesses such as schizophrenia, schizoaffective disorder, or bipolar disorder in prison. This knowledge can be used to improve psychiatric treatment during their time in prison and after release. We want to achieve this by collecting information on the severity of positive psychotic and manic symptoms and negative emotions such as guilt and depression. These are variables that are known to influence treatability and the tendency to commit crimes.

This article describes an explorative study that examines the symptoms of psychiatric patients with schizophrenia, schizoaffective disorder, or bipolar disorder manic phase with psychotic features, who are admitted to a prison psychiatric ward, with the BPRS-E. The BPRS-E is a widely used psychiatric rating scale, to investigate psychotic and affective symptoms. A symptom profile of patients is presented, based on our previously described factor structure of the BPRS-E (Van Beek et al., 2015). In

addition, comparisons are made with the profile of three nonincarcerated patient groups with diagnoses in the same spectrum: two groups of patients diagnosed with schizophrenia (Picardi et al., 2012; Ruggeri et al., 2005) and one group of patients diagnosed with acute mania (Picardi et al., 2008). We expect to find more severe positive symptoms and lower levels of neuroticism. More specifically, we expect to find lower levels of negative emotions like anxiety, depression, and guilt in our sample. As the present study is explorative, the comparisons made with nonincarcerated patients with the same diagnoses described in literature are meant only to put our findings in perspective.

Method

We conducted our study in the penitentiary clinic for psychiatric crisis intervention (Penitentiary Psychiatric Centre Amsterdam [PPCA]). The PPCA is a specialized facility for prisoners who suffer from acute problematic behavior such as violence, the danger of suicide attempts, auto-mutilation, severe disruptive behavior, or an extreme lack of self-care. The patients were in various stages of the judicial process; some were recently arrested, while others had been incarcerated for a longer period. Most patients had histories of homelessness, unemployment, and financial and social problems, and had little or no support from family or friends.

Participants

All patients committed to the PPCA were routinely assessed for treatment planning (Routine Outcome Monitoring [ROM]). The first assessment took place within 1 week of arrival. Patients included in this study were informed about the goal of the assessments before the start and the possibility that the results could be used for research. They were also informed that they were not obliged to participate. Patients who did not consent to participate were not included in the anonymized database. Forty patients were excluded because they did not consent, resulting in a total of 390 patients that were included. Of this group, only patients with one of the following disorders were used in the present article: psychoses, schizophrenia, schizoaffective disorder with manic symptoms, and bipolar disorder manic phase. This resulted in a total of 228 patients. Due to the severe problems with social interaction and the extremely disruptive behavior of the patients, it was not possible to use a structured diagnostic interview, such as the Structured Clinical Interview for DSM-IV Axis I (SCID-I) or the mini-International Neuropsychiatric Interview (MINI). Patients were diagnosed after an extensive period of observation (approximately 11 weeks) by a team comprised of multiple clinicians (psychiatrists and psychologists). Information about previous assessment and treatment history were obtained whenever possible and used in the diagnostic process. This revealed that before the age of 18, 32.4% of the patients were known to have received treatment or institutional attention because of severe psychiatric symptoms and 47.1% because of conduct disorders. These groups are not mutually exclusive; many patients have been suffering from both psychiatric and behavioral

problems from a young age. Although many of the selected patients showed signs of personality disorder, often they could not be diagnosed according to *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., text rev.; *DSM-IV-TR*; American Psychiatric Association, 2000) at the time because they were never free from severe psychiatric symptoms, or information about symptom-free episodes was lacking. Table 1 shows the Axis I and II diagnoses of the patients. It also shows that the majority of these patients (68.9%) were incarcerated because of a violent crime, including 49 patients who were in prison for murder/manslaughter. Other offenses (23.6%) included theft, drug-related crimes, or living in the Netherlands without proper legal status. There were no significant differences in diagnosis between the patients who were incarcerated for violent crimes and those who were incarcerated for nonviolent crimes. In addition, both groups had histories of aggression. Of the patients currently detained for nonviolent crimes, 54.8% were admitted to the PPCA because of violent behavior; 40.0% showed aggression during admission, and the majority (75.1%) had shown severe behavioral problems in the past.

Material and Procedure

The aim of this study was to examine the severity of psychotic and manic symptoms, as well as to collect information about the emotional functioning of the patients in our sample. We used the Dutch translation of the Brief Psychiatric Rating Scale expanded version (BPRS-E) for our study. This instrument is part of the standard assessment for all the patients in our facility and is a widely used 24-item scale for assessing change in a variety of psychotic, manic, and affective symptoms (Velligan et al., 2005). The BPRS is used for both in- and outpatient populations and in clinical pharmacological research (Ruggeri et al., 2005; Thomas, Donnell, & Young, 2004). The internal consistency, interrater reliability, and test-retest reliability for the BPRS-E are good (Kopelowicz, Ventura, Liberman, & Mintz, 2007; Leucht et al., 2005). We used the factor structure that was obtained in a previous study of a large group of incarcerated psychiatric patients (Van Beek et al., 2015). This factor structure consists of the following factors: *affect*, *psychosis*, *activation*, and *resistance*. The item *hostility* did not load on any factor and is included as a separate entity. The factor *affect* includes internally directed symptoms like depression, anxiety, suicidal ideation, and guilt. The factor *psychosis* entails positive symptoms of psychosis such as suspiciousness, delusions, bizarre somatic concerns, and hallucinations. *Activation* is the factor that includes manic symptoms such as elevated mood, excitability, grandiosity, and motor hyperactivity. The factor *negative symptoms* refers to the lack of initiative and coordinated action and includes items like disorientation, formal thought disorder, and distractibility. *Resistance* is a factor that describes withdrawal from treatment or passive aggressiveness. It includes items such as uncooperativeness, tension, and emotional withdrawal, but not direct aggression, which is described by the item *hostility* (Van Beek et al., 2015). For our study, we use the BPRS-E scores on the factor *affect* as a measure of neuroticism, the scores on the factor *psychosis* as a measure of positive

Table 1. Diagnostic and Demographic Characteristics of 228 Offenders Diagnosed With Psychosis or Psychotic Mood Disorder.

Gender		
Men	202	(88.6%)
Women	26	(11.4%)
Age (years)		
M (SD)	32.9 (9.0)	
Substance abuse/dependence		
No diagnosis	36	15.8%
At least one diagnosis	128	56.1%
Unknown	64	28.1%
Mental Disorder Axis I		
Psychosis not otherwise specified (NOS)	78	34.2%
Schizophrenia	100	43.9
Bipolar disorder manic phase	21	9.2%
Schizoaffective disorder	29	12.9%
Mental Disorder Axis II		
Personality disorder cluster B	34	17.5%
Mental retardation	10	4.4%
Diagnosis postponed	172	75.4%
No diagnosis	5	2.2%
History of treatment		
No treatment	34	14.9%
Voluntary treatment	30	13.2%
Involuntary treatment	135	69.2%
Unknown	29	12.7%
Offense		
(Attempt at) murder/manslaughter	48	(21.1%)
Violence	109	(47.8%)
Theft	52	(8.3%)
Other	52	(22.8%)
Ethnic background		
Non-Western	115	(50.4%)
Dutch	82	(36.0%)
Western	27	(11.8%)
Unknown	29	(12.7%)

symptoms, and the scores on the items of the factor *activation* as a measure of manic symptoms.

As controls were not available to us, we used previously published studies to put our exploratory, descriptive results in perspective. We searched for research papers describing BPRS-E item scores of patients with the same diagnoses. We looked for research with the BPRS-E on patients with manic, manic psychotic, or psychotic disorders. A literature search in PubMed (1990-2016) revealed three papers that

Table 2. Demographic Features of Patients in the Studies Used for This Article.

	Van Beek et al., (2013)	Ruggeri et al., (2005)	Picardi et al., (2008)	Picardi et al., (2012)
Location	Amsterdam	Amsterdam	Various locations in Italy	Various locations in Italy
Setting	Specialized incarceration	Inpatient and outpatient	Hospitalized in GHPU, academic or private setting	Hospitalized in GHPU, academic or private setting
Diagnosis	Psychotic and manic psychotic disorders	Schizophrenia	Acute mania 64% with and 36% without psychotic features	Schizophrenia
(N), male/female	(140), 121/19	(61), 41/20	(88), 45/43	(239), 150/89
Age	$M = 33.06$, $SD = 9.34$	$M = 39.9$, $SD = 9.9$	$M = 46.0$, $SD =$ 15.3	$M = 43.2$, $SD = 13.7$
Non-European	50.0%	45.9%	8.0%	2.5%

Note. GHPU = general hospital psychiatric unit.

published the mean scores for each item on the BPRS-E allowing us to calculate domain scores. Two papers described scores of patients with schizophrenia (Picardi et al., 2012; Ruggeri et al., 2005) and one examined patients with acute mania (Picardi et al., 2008). All groups received treatment through mental health care. No papers were identified describing BPRS-E data collected from imprisoned patients.

Statistical Analysis

First, the mean scores were calculated for our sample and the three groups of patients from previously published papers so that a symptom profile for each group could be determined. Thereafter, statistical analyses were performed using SPSS 21, comparing the psychotic and affective symptoms of the incarcerated psychiatric patients with two different groups of patients diagnosed with schizophrenia (Picardi et al., 2012; Ruggeri et al., 2005) and one group of patients diagnosed with mania (Picardi et al., 2008). The Ruggeri (2005) paper was a multisite study examining schizophrenia in five different European countries. One of the sites was in Amsterdam, the Netherlands. We used the data from the Amsterdam patients of the Ruggeri study, as this group of inhabitants of the same city with the same spectrum of diagnoses is an appropriate group to put our data in perspective. Table 2 summarizes the information about the populations under research.

To create a profile for the patients in our sample, we performed a general linear model (GLM) repeated-measures ANOVA. The within subjects factor consists of six variables (the five domains in the BPRS-E and the item hostility). Using customized contrasts (mmatrices) in GLM, it is possible to perform a multivariate comparison of the within-subject variables with the grand mean on the BPRS-E and evaluate the areas with relatively more psychiatric problems and areas with relatively fewer

problems. In the final analysis, the same procedure is being used to compare our sample with patient groups used in previously published papers. Using customized contrasts allowed us to examine whether the psychiatric profile of our sample of patients differed from the profiles of patients from the three comparison studies. When a statistically significant difference in psychiatric profile was found, post hoc analyses were used to examine on which of the domains the differences occurred. For each main analysis, a significance level of $p < .05$ was used. For post hoc comparisons, a Bonferroni correction was applied by dividing the p value by 6 (five domains plus the item hostility) resulting in a $p < .0083$ to reach statistical significance.

Results

Characteristics of Incarcerated Patients With Psychotic and Manic Disorders

All of the 228 selected patients were interviewed and observed according to the instructions of the BPRS-E. Of these examinations, 88 had “zero” scores on one or more of the 24 items, meaning that it was not possible to obtain a score. Reasons for “zero” scores were mutism, severe chaotic or violent behavior, or other severe communicational problems and lack of compliance. We decided to exclude interviews containing zero scores. We believe a zero score has clinical meaning in this sample, but they cannot be scientifically interpreted. One hundred forty completed evaluations were left. Statistical analysis showed that there were no significant differences between the 140 included and 88 excluded patients with respect to demographic or diagnostic variables. Table 3 shows diagnostic and demographic characteristics of the 140 patients included in our research.

Symptom Profile of Incarcerated Patients

In the first analysis, all domains and the item hostility were compared with the grand mean of our sample ($M = 2.66$) on the BPRS-E, to chart the profile of psychotic and manic symptoms and emotional functioning. The profile significantly deviated from the grand mean, $F(6, 134) = 113.18, p < .001$. Post hoc customized comparisons show that our group of incarcerated psychiatric patients had relatively high scores on the domains *psychosis*, *activation* (both univariate p values $< .001$), and *hostility* ($p = .001$). In addition, we found relatively low scores on the domain *affect*, *negative symptoms*, and *resistance* (all univariate p values $< .001$).

Symptom Profile of Three Groups of Patients Treated by Mental Health Care

To put our findings in perspective, the symptom profile of our group was compared with those of two nonincarcerated groups of patients suffering from

Table 3. Diagnostic Characteristics of 140 Offenders Diagnosed With Psychosis or Psychotic Mood Disorder.

Substance abuse/dependence		
No diagnosis	19	13.6%
At least one diagnosis	81	57.9%
Unknown	40	28.6%
History of treatment		
No treatment	21	15.0%
Voluntary treatment	19	13.6%
Involuntary treatment	87	62.1%
Unknown	13	9.3%
Onset of problematic conduct		
0-12	22	15.7%
12-18	25	17.9%
<18	59	42.1%
Unknown	34	24.3%
Onset of psychiatric symptoms		
0-12	3	2.1%
12-18	37	26.4%
<18	69	49.3%
Unknown	31	21.1%
Mental Disorder Axis I		
Psychotic disorder	106	75.7%
Manic psychotic disorder	16	11.4%
Schizoaffective disorder	18	12.9%
Mental Disorder Axis II		
Personality disorder cluster B	31	21.1%
Mental retardation	5	3.6%
Diagnosis postponed	101	72.1%
No diagnosis	3	2.1%

schizophrenia. One group of patients was admitted to a hospital, and the other group consisted of in- and outpatients. The third group consisted of hospitalized patients with acute mania.

Comparing our incarcerated patients with a group of hospitalized patients with schizophrenia (Picardi et al., 2012) demonstrated a significant difference between the BPRS-E profiles of the incarcerated and the hospitalized patients, $F(6, 134) = 71.15, p < .001$. The post hoc univariate analyses showed that the incarcerated patients scored lower on the domain *affect* ($p < .001$) than the group of patients admitted to a hospital. They also scored lower on the domain *negative symptoms* and *resistance* (both p values $< .001$). The incarcerated patient scored higher on the domains *activation* ($p < .001$) and *hostility* ($p = .001$). The scores on the domain *psychosis* were not different ($p = .93$) from the group of hospitalized patients.

Table 4. Calculated Mean Factor Scores of Previous Research and Univariate Comparisons With the Present Study.

Factor	Present study	Ruggeri et al. (2005)	Picardi et al. (2008)	Picardi et al. (2012)
	M (SE)	M	M	M
Negative symptoms	1.70 (.06)	1.33***	2.38***	2.31***
Resistance	1.99 (.07)	1.32***	2.60***	2.84***
Activation	3.70 (.08)	2.52***	4.37***	2.72***
Psychosis	3.41 (.13)	2.05***	2.53***	3.42
Affect	1.91 (.08)	2.10*	1.65**	2.19***
Hostility	3.19 (.15)	1.50***	3.30	2.67***

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

Symptom profile of a group of hospitalized patients and outpatients with schizophrenia. The second comparative analysis with the group of patients with schizophrenia described in the Ruggeri (2005) paper showed an overall difference of the BPRS-E profile compared with our group of incarcerated patients, $F(6, 134) = 61.78, p < .001$. The customized univariate analyses showed that the offenders have higher scores on the domains *negative symptoms*, *resistance*, *activation*, *psychosis*, and *hostility* (all p values $< .001$) and lower on the domain *affect* ($p = .02$). This effect was not confirmed after Bonferroni correction.

Symptom profile of a group of hospitalized patients with mania. The final BPRS-E profile comparison was with a group of patients diagnosed with acute mania (Picardi et al., 2008) who differed significantly from our group of offenders, $F(6, 134) = 47.55, p < .001$. The univariate analyses showed that offenders are having fewer problems on *negative symptoms*, *resistance*, and *activation* (all p values $< .001$) and showed significantly more problems on *psychoses* and *affect* (both p values $< .001$). No significant difference between the groups was found on *hostility* ($p = .44$). The comparative analyses are illustrated in Figure 1.

Discussion

We conducted an exploratory and descriptive study. We managed to fully examine 140 out of the 228 incarcerated patients with schizophrenia, schizoaffective disorder, and bipolar disorder manic phase. We compared their psychiatric symptom profile with those of nonincarcerated patient groups described in literature. The profile of our incarcerated patients was characterized by high scores on the domains *psychosis*, *activation*, and *hostility*. This means that these patients suffer from positive symptoms of psychoses and manic symptoms, and show verbal and physical aggression (Dingemans, Linszen, Lenior, & Smeets, 1995; Velligan et al., 2005). In addition,

Figure 1. Symptom profiles based on BPRS-E factors.
 Note. BPRS-E = Brief Psychiatric Rating Scale–Expanded.

these patients had low scores on the domains affect, resistance, and negative symptoms. This indicates that the incarcerated psychiatric patients reported that they did not feel depressed, anxious, or guilty; did not suffer from confusion or emotional withdrawal; and did not show withdrawn or passive aggressive behavior. The relatively high scores in the profile of our patients (psychosis, activation, and the item hostility) reflect symptoms and complaints that are outwardly directed and are loaded with anger and aggression. The lower scores on the domain affect may reflect an inability to deal with negative emotions internally. Our patients are in prison and mentally ill. Usually, the implications for their lives are severe. We may assume there are groups of patients that have enough problems to ruminate about, yet they do not report worries, sadness, or guilt. This is consistent with our hypotheses that offending psychiatric patients may lack in neuroticism.

The relatively low scores of our group on the domains negative symptoms and resistance could be interpreted as a lack of inhibiting forces. It has been suggested that there is a negative relationship between negative symptoms and overt aggression (Krakowski & Czobor, 2014; Volavka, 2013). In addition, the domain resistance reflects a refusal to cooperate and a tendency, or perhaps capacity, to show discontent in a passive or indirect manner and does not include overt aggression (Van Beek et al., 2015). However, more research is needed to explore the relationship between these domains and the violence displayed by the incarcerated patients.

The second part of our analyses, the comparisons with three nonincarcerated groups with a diagnosis in the same spectrum, resulted in clinical profiles that each differed significantly from our group of incarcerated patients (Table 4). Compared with a mixed group of in- and outpatients with schizophrenia (Ruggeri et al., 2005), the incarcerated patients scored higher on all domains but affect. This indicates that the incarcerated patients suffer from more severe psychotic and manic symptoms and show more aggression.

In comparison with a group of hospitalized patients with acute mania (Picardi et al., 2008), the incarcerated patients scored higher on psychosis but lower on activation, negative symptoms, and resistance. There was no difference on hostility. Given that the incarcerated patients had diagnoses in the manic and psychotic spectrum, it is not surprising that they show more psychotic symptoms and lower levels of manic symptoms. The level of hostility was high in both samples.

The group of patients with schizophrenia that were all hospitalized (Picardi et al., 2012) suffered from the same level of positive symptoms of psychosis, but scored significantly higher on the domains negative symptoms, affect, and resistance, meaning that complaints like depression, guilt, energy loss, and withdrawal were much more prevalent in the hospitalized group. The level of violence, agitation, and restlessness, as reflected by the domains activation and hostility, however, was significantly higher in the incarcerated patients. These findings might also be consistent with literature suggesting that positive and manic symptoms enhance the risk of violent offending (Coid et al., 2013; Volavka, 2013). We hypothesize that the absence of affective and negative symptoms might further enhance the risk of violent conduct and are therefore important variables to assess. We suggest that it would be worthwhile to examine the interaction between domains and their relationship with violent offending.

Finally, we suggest that the complexity of the incarcerated psychiatric patients lies in the combination of symptoms that demand urgent treatment and are associated with danger on one hand, and yet, on the other hand, a coping style that is associated with poor treatment adherence, unstable interactions, and acting out (Keers et al., 2014). Failure to form an alliance with these patients and contain their disruptive behavior are factors that can lead to crime and imprisonment (White & Whiteford, 2006).

In any setting, the characteristics of these patients would be challenging, but a bulk of literature is suggesting that prisons are especially unsuitable for the treatment of psychiatric patients. Imprisonment leads to a worsening of psychiatric symptoms. In addition, incarceration increases the risk of posttraumatic stress disorder (PTSD) and recidivism for mentally ill persons (Lovell, Gagliardi, & Peterson, 2002; Torrey et al., 2014). Our exploratory findings suggest that standard psychiatric care is not sufficient for these patients. They suffer from severe manic, positive psychotic symptoms, and hostility. The implications for treatment are that the environment should offer enough holding to be able to contain disruptive behavior of patients. Manpower and techniques to stop violence are among the necessary basics (Martin & Daffern, 2006), but holding also means a predictable, consistent approach to stabilize both the environment and the patient and prevent escalations (Bateman & Fonagy, 2012).

In addition, we found that our incarcerated psychiatric patients do not report complaints that are indicative of internal suffering. To engage patients who do not feel the need themselves in this kind of treatment poses enormous challenges. Again, a stable, predictable and consistent approach is needed, but prisons are vulnerable to a culture of power (Crewe, 2012). The creation of an environment that facilitates the growth of a working alliance and enhances motivation for treatment is hard work (Maeve & Vaughn, 2001), especially with severely ill and hostile patients within a restrictive regime. Well-designed training, incessant coaching, and care for employees are keys to success.

The transition from prison to community services is especially important. The rates of violent reoffending in psychiatric patients after release are very high (Chang, Larsson, Lichtenstein, & Fazel, 2015). A complicating factor is that patients are released when their sentence is finished, which can be at any stage of treatment. Not only continuity of high-intensity care is asked for but also legal adaptations to provide treatment for those who lack in motivation, adherence, and capacity to commit themselves to a long-term treatment (Lamb & Weinberger, 2011).

Our symptom profile could be helpful in identifying those patients with severe psychiatric disorder who are at risk of only receiving treatment in prison. In addition, our study shows that information about this combination of symptoms can be obtained with the BPRS-E, an instrument that is already widely used in clinical practice and that is easily administered. As argued before, in almost all cases, the chain of events leading to imprisonment includes many previous treatment attempts with unsatisfactory results. We found that the patients we researched had histories of severe violence, often directed toward the people closest to them, such as family members and sometimes health care workers. A substantial proportion of those victims died or suffered long-lasting consequences. These patterns of unsuccessful treatment and problematic alliances are not likely to have subsided when the patient exits the prison gates. Therefore, we hope to have contributed to the development of an effective treatment of psychiatric patients who are at risk of violent offending.

Limitations

Notwithstanding our efforts, we did not manage to collect all the data we were hoping for and had to exclude a large group of 88 subjects from the analyses. Even though we found no differences with respect to demographic variables or diagnoses, this might have resulted in some selection bias. As it was not possible for these excluded patients to collect scores on all 24 BPRS-E items because of disruptive behavior, it is likely that the problems of these patients are even more severe. This might have mitigated our results. Our research sample included men and women. Incarcerated women might have a different psychiatric profile than men. In our study, we found low levels of anxiety and depression. There is evidence, however, that incarcerated women show significantly higher levels of anxiety than men (Coolidge, Marle, Van Horn, & Segal, 2011; Drapalski, Youman, Stuewig, & Tangney, 2009). Given the small number of women in our sample, we were not able to perform analyses on differences in profile.

This could be a valuable addition in future research. Moreover, our research lacks data from a control group collected by ourselves and consequently was not scored by the same professionals. The value of this manuscript lays in the fact that it examines patients who are potentially dangerous and difficult to treat in the community, and who have rarely been subject of face-to-face empirical research.

Declaration of Conflicting Interests

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