



ORIGINAL ARTICLE

Characteristics of patients with mental disorders in a Slovene prison: A retrospective observational naturalistic study



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Abstract

Background and objectives: The prevalence of mental disorders in EU prisons is high. Little is known about provision of care in Eastern and Central European countries, particularly in former Yugoslavian countries. The aim of this study was to assess diagnoses, characteristics and care provision of prisoners diagnosed with mental disorders in the psychiatric outpatient clinic in the biggest Slovene male prison Dob.

Methods: Prison psychiatrist collected data on psychiatric diagnosis, suicide rates and care provision from patients' medical records and charts. In addition, interviews were performed with leading representatives of service organization, members of staff working in psychiatric outpatient clinic, and prison guards.

Results: Out of 520 prisoners, 220 (42.3%) were involved in treatment in psychiatric outpatient clinic and all were included in this research. The data were gathered in 2016. The most prevalent diagnosis was addiction disorder in 82.7% (182) of all patients. Out of them only 24 (10.9%) were diagnosed with alcohol addiction. 94 prisoners (42.7%) were on substitution therapy because of drug addiction. The point prevalence of psychotic disorders was 7.3%, 10.0% for mood disorders and 15.9% for anxiety disorders. Personality disorders were diagnosed in 19.5% of all patients. Co-morbidity was diagnosed in 80 patients (36.4%). There were no suicides in the prison Dob in the period between 2012 and 2016. In this period strong and systematic anti-suicide measures have been already established and applied in the prison. The prison suicide prevention plan is described.

Conclusions: The prevalence of addiction disorders in Slovene prison is high. Absence of suicides in the four year period indicates that quality of suicide prevention measures in prison Dob.

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Background

The treatment of people with mental health disorders who are serving a prison sentence presents an ethical, human rights and professional problem in countries worldwide.¹ The prevalence of mental disorders in prisons is high and far exceeds the prevalence and severity in equivalent general population surveys.^{2,3} European prisons systems are confronted with large numbers of persons with mental disorders; more than half of all prisoners meet the criteria for a mental disorder⁴ according to the International Statistical Classification of Diseases and Related Health Problems (ICD) 10.

Prevalence of mental disorders among prisoners varies from 41% to 80% depending on study methodology, setting, peculiarities of the prison system in each country and definition of psychiatric disorders used by researchers.^{5,6}

It is estimated that psychosis is present in 5–12%, depression in 10–53% and anxiety disorders in 26% of prisoners. 33% of prisoners are addicted to alcohol and more than 57% to illegal drugs.^{4,7–10}

Many addiction disorders might present themselves in the form of comorbidity with other mental disorders,¹¹ which worsens the prognosis of psychiatric disorders, increases repeat offending and causes premature mortality following release.¹² Comorbidity might add to large variations among prevalence rates of specific mental disorders.^{3,13–16}

People who have been imprisoned frequently have suicidal thoughts and can demonstrate suicidal behaviour throughout their lives. Suicide is often the single most common cause of death in correctional settings.¹⁷ As a group, prisoners have three to six times higher suicide rate than people in the average.^{9,18,19} The risk of suicide in European prisons is higher than among the general population and differs among nations and systems.^{20,21}

Several studies have found that the need for prisoners to receive psychiatric assistance or attention is not recognized. Birmingham et al.¹⁴ noted that prison medical staff correctly identified mental disorders in only 9% of the prisoners with mental disorders. They found that only a quarter of the acutely psychotic prisoners had been identified as the result of screening

In Slovenia, the number of imprisoned persons increased from 772 in 1995 to 1463 in 2015 with 70.9 prisoners per 100,000 inhabitants.²² The standards of treatment for prisoners with mental disorders are historically rooted in the development of Slovene forensic psychiatry, which was first organized in an open ward as a therapeutic community, with psychotherapeutic and rehabilitative orientation with no restrictive measures. There were no violent incidents in this ward and it had a major impact on destigmatization in the field.²³ However, many forensic patients were hospitalized in closed wards of other psychiatric institutions, with no particular additional measures.

There were two visits to the Slovene prison and forensic system carried out by the European Committee for the Prevention of Torture and Inhuman or Degrading Treatment or Punishment (CPT) which functions within the Human Rights Ombudsman of Slovenia²⁴ in 2001 and 2012. The CPT pointed out that prisoners suffering from psychiatric disorders requiring hospital care should be treated in an

appropriate facility that is suitably equipped and has sufficiently qualified staff to provide the necessary care. The opening of Forensic department in Maribor was seen as major step forward in Slovenian psychiatry and the open forensic ward idea was finally abandoned.²⁵ The Slovenian authorities were also encouraged to further develop activity programmes so that all inmates can benefit from work, training and education. Slovenian prisons followed the CPT and Ombudsman recommendations in the following years. Suicide rates in Slovenian prisons dropped dramatically.

The average EU amount spent for prisoner per day of detention in custody²⁶ was 99€. The average amount in UK²⁷ has risen from 76€ per day per prisoner in 2014 to 106€ per day in 2015. Prisoner cost per day in Slovenia in 2015 was 62€.²²

The staff in Dob prison is comprised of 52 employees – 20 pedagogues, 3 psychologists, 5 social workers and 4 nurses, as well as organizers of leisure activities, organizers of education and other professional workers employed at prison. Special programmes are designed for those imprisoned with drug or alcohol addiction. There is regular group and individual social skills training and communication training, often conducted before discharge to enable social inclusion. Every prisoner has an individual care plan and is informed of the option to consult with a psychiatrist. The majority of referrals to psychiatrists happen because the prison staff detects unusual behaviour of prisoners. All prison staff has some sort of additional education on mental health issues, even though this education is not obligatory and systematic and often only improves communication skills.

The main aim of this study was to present data about the number of treated people with mental health disorders, their diagnoses and care provisions in the largest Slovene prison Dob, with a special focus on suicide.

Methods

Data collection

We conducted a retrospective observational naturalistic study. The data from patients' medical records and charts were collected by prison psychiatrists in May 2016. All patients who were consulted by psychiatrist during this time period were included and their data was analyzed retrospectively. The informal interviews with leading representatives of service organizations, members of staff working in the psychiatric dispensary, and prison guards were performed in June 2016. The researcher was asking about service provision, availability of staff and about possible gaps in actual service provision as seen by interviewees. The interviews were open-ended starting with a general question about their work, followed by questions about possible problems in service provision. In parallel, the prison rules regarding mental health care were gathered and reviewed. Data on suicide frequency during a period of 10 years was obtained from the prison reports²² and reviewed. This study included the data regarding the ICD-10 classification. All available data were included, only data on patients' pharmacotherapies were excluded from this study. For all calculations, the total prevalences have been calculated with the number of patients included in the psychiatric dispensary only

($N=220$), except for the percentage of patients diagnosed with mental disorders, which has been calculated with the total number of patients (psychiatric dispensary + others; $N=520$).

Data analysis and presentation

Data on mental health services, suicide rate and suicide prevention measures are presented. The percentages were calculated from the total of diagnosed patients according to the observational data in 2016 (all patients with existing diagnosis were included). Ethical approval for the study was obtained from the National Medical Ethics Committee of the Republic of Slovenia in 2016.

Results

Out of 520 male prisoners in Dob prison, 220 (42.3%) were involved in treatment in psychiatric dispensary. Average age of patients was 39 years, ranging from 21 to 74 years. 94 (42.7%) included patients were on substitution therapy due to drug addiction. The psychiatric diagnoses of patients and their percentages in psychiatric dispensary are presented below in [Table 1](#).

The most prevalent diagnosis was addiction in both the patients receiving substitution therapy group and among other patients (82.7% of all patients). The prevalence of psychotic disorders in Dob was 16 prisoners, which represents 7.3% of patients. Personality disorders were diagnosed in 19.5% of patients.

The frequency of multiple diagnoses is presented in [Table 2](#).

Comorbidity was presented in 80 patients, which represented 36.4% of patients.

Suicide

In a 10-year period from January 1995 to May 2016 there were 13 suicides in Dob prison. The results are given in [Fig. 1](#).

Discussion

This study is the first study showing a point prevalence of different mental and behavioural disorders in the biggest Slovenian male prison in Eastern and Central Europe. The results of our study showed that 43% of prisoners were diagnosed with a mental disorder, which is quite different from the rates, which have been already reported in some EU countries, except the prevalence for psychotic disorders.⁷ Affective disorders, anxiety disorders and personality disorders are under diagnosed in this Slovenian prison. On the other hand, we found high prevalence for addiction disorders, even though not as high as in some reports, but still reaching 82.7% of the treated prisoners or 35% of the prisoners. In Dob prison, point prevalence for depression and mood disorders were lower than in comparative reports.⁹ One of the possible reasons for this could be under diagnosing, because psychiatrists are present in the Dob prison only three times a week. As noted, the most prevalent diagnosis, calculated in 182 patients out of 220, is diagnosed

addiction to alcohol or drugs. 95 prisoners (43%) were on substitution therapy because of drug addiction. Alcohol addiction was diagnosed relatively rarely, only in 24 patients (10.9%), even though alcohol addiction is a major mental health problem in Slovenia and is observed/diagnosed more frequently than other addiction disorders.²⁸ This might be a result of better availability of other psychoactive substances in the prison system in comparison to alcohol. It is possible that people addicted to alcohol start using prescribed medication after withdrawal of alcohol and do not prepared to talk about their alcohol addiction. Addiction diagnoses might overshadow other psychiatric disorders that are clearly diagnosed less frequently (e.g. ADHD). This might be explained by great efforts of the medical staff to provide treatment for addiction disorders and their diagnostic and treatment skills for this group of patients. Substitution therapy is widely available, which might influence inclusion in this form of treatment and support. High rates of substance misuse are found in other European Union prisons with varying rates from 10–48% of prisoners.⁸ In Dob prison, comorbidity was found in 36.4% of diagnosed patients. This is less than in the recent Bebbington's et al. study⁷ (2016). This result reveals the time restrictions of prison psychiatrists and targeting of addiction diagnoses that might hide other unrecognized serious psychiatric disorders. However, the shortage of psychiatrists is only one part of general shortage of staff and low funding commonly seen in Slovenian prisons. The number of staff didn't increase proportionally to growing number of prisoners, which should be necessary to cope with these important issues.

In spite of the above-mentioned restrictions, it is clear that in the prison Dob, the suicide rate is very low. There were 13 suicides from 1995 to 2005, 7 suicides from 2005 to 2012 and no suicide from 2012 to 2015. This reduction could be explained with the implementation of the Anti-suicide Strategic Plan in 2004 and the implementation of screening for suicidal behaviour at the entrance point for every prisoner in 2012. Both programmes improved readiness of the staff and their skills regarding recognizing signs and symptoms of suicidal behaviour.²² The suicide index actually dropped in the whole Slovenian prison system from 34.8 in 2002 to 20.5 in 2015 with no suicides in 2013 and 2014,²² which shows that the national anti-suicide programme in prisons was successful. We believe that Slovene and prison Dob suicide prevention measures represent a good practice example of suicide prevention. Besides improving sensitivity and knowledge of prison staff about suicide behaviour, recommendations about mental health prevention were followed accurately. From the point of view of interviews with prison staff we could see strong commitment of staff towards caring for people at risk in the institution. The number of rewards for improved behaviour of prisoners is rising, and the number of extreme punishments with seclusion is being reduced. In spite of that, the incidents in the prison are relatively rare, compared to reports from other countries.²⁹ The attitude shift, which directly followed CPT directions, might be a lever to provide better care, even though with scarce resources.

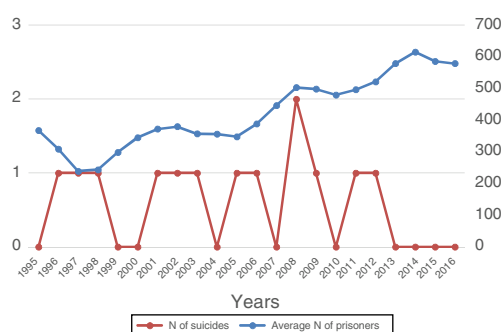
This study has several limitations. The number of prisoners involved in psychiatric treatment depends on their own decision and staff encouragement, but they can still refuse to enter the psychiatric service, which minimizes

Table 1 The number of patients with psychiatric diagnoses and their percentages results in psychiatric dispensary in 2016.

Diagnosis (ICD-10 classification)	Number of patients (N)	Percentage (%)
F00-F09 Organic, including symptomatic, mental disorders	4	1.82
F10-F19 Mental and behavioural disorders due to psychoactive substance use	182	82.7
F20-F29 Schizophrenia, schizotypal and delusional disorders	16	7.27
F30-F39 Mood [affective] disorders	22	10.0
F40-F48 Neurotic, stress-related and somatoform disorders	35	15.9
F50-F59 Behavioural syndromes associated with physiological disturbances and physical factors	10	4.55
F60-F69 Disorders of adult personality and behaviour	43	19.5
F70-F79 Mental retardation	3	1.37
F80-F89 Disorders of psychological development	0	0.0
F90-F98 Behavioural and emotional disorders with onset usually occurring in childhood and adolescence	6	2.72
F99 Unspecified mental disorder	0	0.0
Z00-Z99 Factors influencing health status and contact with health services	2	0.91

Table 2 Comorbidity (the number of patients with concomitant diagnoses).

No. of concomitant diagnoses	No. of patients
Without diagnosis	0
1 diagnosis	140
2 diagnoses	56
3 diagnoses	20
4 diagnoses	4

**Figure 1** The annual number of suicides in Slovenian prison Dob (red line with circles) and the average number of prisoners (blue line with circles).

the incidence and prevalence of mental disorders. The number of people in need is not actually fully known. Diagnosis might be inaccurate in some cases when the

clinical picture is blurred because of drug addiction and comorbidity (e.g. bipolar depression, ADHD). Continuous observation of patients that is sometimes needed to make a final diagnosis is not always possible in Dob. An important limitation is the ICD-10 classification system, because some patients might not be diagnosed and on the other hand, some patients should have two diagnoses (perhaps some diagnoses were not written in the chart). In methodology, we calculated with number of prisoners included to the psychiatric dispensary ($n = 220$), information for other prisoners was not available. Another important limitation is the study design (retrospective observational study), where many patients were not diagnosed at the same time. All data were obtained within a short period, which could have led to some differences in point prevalence results. However, this was a naturalistic study, which opened a new window into these issues in this part of Europe and therefore results could be used more widely in this part of Europe. This study design is positive for clinical readers and workers, because it was done in real clinical environment and therefore the results show real clinical practice with all difficulties.

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Conflict of interest

The authors of this article declare no conflict of interest.

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