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Diagnoses of Personality Disorders Between 1879 and 1929 in the Largest Croatian Psychiatric Hospital

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Aim To study demographic characteristics, comorbidities, and diagnoses of patients admitted for personality disorders to Psychiatric Hospital Vrapče between 1879 and 1929.

Methods Data were collected from the archives of Vrapče Psychiatric Hospital for a 50-year period from November 1879 to December 1929. The ratio between the number of patients with personality disorder and the number of all admitted patients was determined. We used 3 systems of definitions of personality disorder: for cases before 1923, we used Prichard's concept of moral insanity and unpublished definitions of one of the hospital managers at that time; for cases after 1923, we used Schneider's classification of psychopathic personalities and unpublished definitions of one of the hospital managers at that time.

Results The total number of admissions during the study period was 18 960, 141 (0.74%) of which were for a personality disorder. Of the admitted patients, 85.8% were men and 59.7% were single. The average age was 29.7 ± 9.5 years. Most of them (61.7%) were sent to the hospital by courts or police, and the median length of stay was 92 days (interquartile range, 92.0-127.5 days). The first patient with a personality disorder was admitted in 1889 with a diagnosis of moral insanity. Until 1920, only 3 terms were used for personality disorder: moral insanity, psychopathic inferiority, and psychopathy. The term was subdivided only after that year. Of the 141 patients admitted for personality disorder, 34 (24.1%) were discharged with comorbid disorders, mainly substance abuse. The most common single comorbid diagnosis was Ganser syndrome (prison psychosis).

Conclusion Archives of the Vrapče Psychiatric Hospital contain reliable data about the earliest nomenclature of personality disorders, the increase in the prevalence of personality disorders, and further subdivision of the term personality disorder. Nomenclature for these disorders used at the Vrapče Psychiatric Hospital was consistent with that used in clinical practice in other parts of the world at the time.

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Classification of personality disorders is one of the least satisfactory parts of contemporary psychiatric classification (1). In the 5th chapter of the 10th edition of the International Statistical Classification of Diseases and Related Health Problems (ICD-10), there are 10 different types of personality disorders, while in the 4th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) there are 11 types (2,3). Also, DSM puts personality disorders on one axis (Axis II) and other mental disorders, except mental retardation, on the other (Axis I), while ICD-10 does not put mental disorders on different axes. The different treatment of personality disorders by the two psychiatric classification schemes underscores how variable and inconsistent the diagnosis of personality disorders is.

One of the first terms used for personality disorders was moral insanity, introduced by Prichard in 1835 (4-6). This concept remained in use until 1891, when German psychiatrist Koch introduced the term psychopathic inferiority (7). Koch further included various conditions in the category of psychopathic inferiority, paving the way for gradual subdivision of the personality disorder nomenclature (6). In the subdivision, the word psychopathy persisted and was meant to emphasize constitutional, genetic etiology (7).

The Vrapče Psychiatric Hospital contains archives with medical documentation on all patients treated in the hospital from its founding more than 130 years ago. Based on this documentation, the present study examined the development of the nomenclature for personality disorder and its comorbidities, as well as the demographics of early patients with this condition.

Short history of Vrapče Psychiatric Hospital

The hospital was founded on November 15, 1879, under the name Royal National Institute for the Insane in Stenjevec. The green light for foundation was given from Vienna and the construction began during the administration of the Croatian Banus Ivan Mažuranić. At that time, psychiatric hospitals had already been opened in Vienna in 1861 and in Budapest in 1868. The site of construction was located 6 km outside Zagreb but today is a part of the city. The hospital was designed for 200 to 250 patients but from the very beginning there was a need for expansion and reconstruction to face the rapid increase in the number of patients. Today, the hospital has a capacity of more than 800 patients.

The hospital hosted the foundation of the Society of Psychiatrists in 1932, and a year later a psychiatric congress. It pioneered the introduction of new treatment methods for psychiatric patients in Croatia – treatment by insulin coma was introduced in 1935, electroconvulsive therapy in 1942, and the first effective neuroleptic, Largactil, was applied for the first time in 1953. With a growing number of its psychiatrists earning academic degrees and some of them becoming members of the faculty, the Hospital took an active part in the promotion of professional and scientific practices in psychiatry.

Description of the earliest patient records in 1879

The cover page on its top contains the name of the hospital: Royal National Institute for the Insane in Stenjevec, and below it the handwritten registration number, name, and surname of the patient. On the front page, there are several items in printed letters divided in two columns. The left column contains data about age, religion, marital status, employment, birth place, homeland, address, the person accompanying the patient to the hospital, additional medical documentation, whether the patient has previously been in hospital, whether the patient has a criminal record and is under an investigation, the name of the guardian, and the address of relatives. The right column contains the date of admission, date of discharge, date and reason of death, length of hospitalization, diagnosis, duration of illness, heredity, etiology, somatic illnesses, and anthropological characteristics of the patient. On subsequent pages, there is handwritten patient description, beginning with very detailed somatic status followed by brief mental status, based mainly on the rapport with the interviewing physician. After this, there are anamnestic data and a final description of the state in which the patient is about to be discharged and to whom he or she will be handed over. The patient with registration number 1 was admitted to hospital on November 15, 1879 and was treated for the diagnosis of atrophica.

The earliest records were in the form of a rectangular notebook consisting of two 36 cm×22.5 cm sheets of paper. Items on these records were printed and in Croatian, while data related to the items were handwritten, partially in Croatian and partially in German. It is worth mentioning that the data were mainly written in calligraphy. The most frequent additional documentation was a single sheet of paper handwritten by physicians outside of the hospital, giving a short description of the reasons why the patient was sent to the hospital. These documents were written mainly

in German, and the signatures show that most of physicians had names and surnames of German origin.

METHODS

This study is a retrospective, cross-sectional study of medical records from the Vrapče Psychiatric Hospital. Due to the small number of patients in the examined period, all admissions were taken into account, even readmissions of the same patient. The relevant diagnoses were those listed at discharge. Comorbidity was defined as the presence of one or more illnesses (diagnoses) in addition to personality disorder (8-10). We investigated a period of 50 years and 46 days from November 15, 1879 to December 31, 1929.

The records

All admissions with a discharge diagnosis belonging to the current diagnostic category of personality disorders F60 were included in the analysis (2,3). We used Prichard's concept of moral insanity for the data from the first year of the study period until 1923 (4,5), Schneider's classification of psychopathic personalities for the data from 1923 until the end of the study period (11,12), and unpublished classifications of two hospital managers at the time, Ivo Žirovčić (for cases from 1879 to 1923) and Aleksej Kužljenko (for cases from 1923 to 1929).

Only the data that were complete and readable were taken into consideration. The number of admissions with a discharge diagnosis of personality disorder was compared with the total number of admissions each year during the entire study period. In addition, the following aspects of cases with personality disorder were examined: distribution according to sex, average age, marital status (single, married, divorced, widowed), the number of admissions with a diagnosis of personality disorder sent by courts, and the average length of hospital stay. Finally, the nomenclature of all diagnoses of personality disorder and comorbidities was noted.

Statistical analysis

Median and interquartile range were reported for continuous variables because of their asymmetric distribution. Nominal variables were analyzed with the Pearson χ^2 test. Statistical significance level was set at $P < 0.05$. Statistical analysis was carried out using SPSS for Windows, version 13.0 (SPSS Inc., Chicago, IL; USA) and Microsoft Excel, version 11 (Microsoft, Redmond, WA, USA).

RESULTS

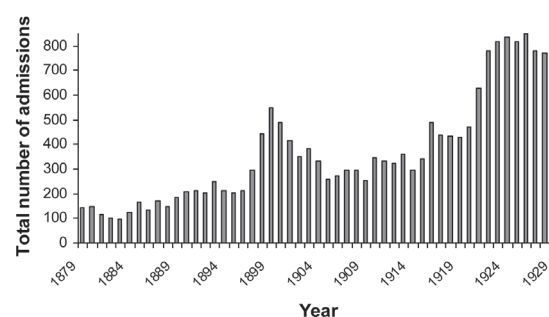
Analysis of patients diagnosed with personality disorder

During the study period of 50 years and 46 days, Vrapče Psychiatric Hospital had 18 960 admissions. Of these, 141 (0.74%) were patients with a diagnosis of personality disorder. Of these 141, 2 (1.4%) had incomplete data and were excluded from a detailed analysis: the first had no record of marital status and employment and the second had no record of discharge date.

In 1879, when the hospital worked during the last 46 days of the year, there were 142 admissions and 146 in 1880 (Figure 1). During the next few years, there was a slow decrease in the number of admissions, until 1883, when there were 98 admissions. From 1884, there was a continuous increase in the number of admissions with the highest number (849 cases) in 1926. The number of admissions increased more than 5-fold between 1880 (146 cases) and 1929 (768 cases; $\chi^2_1 = 421.927$; $P < 0.001$).

The first admission with a discharge diagnosis of personality disorder took place in 1889. It was the only admission with such a diagnosis during that year. The next 5 admissions of patients diagnosed with personality disorders occurred once per year in 1891, 1892, 1895, 1900, and 1919. The number of admissions during 1920 increased to 14 and since then patients with a discharge diagnosis of personality disorder were regularly admitted. It must be emphasized that during the entire study period of over 50 years, there were only 16 years in which patients with the diagnosis of personality disorder were admitted.

Figure 1.

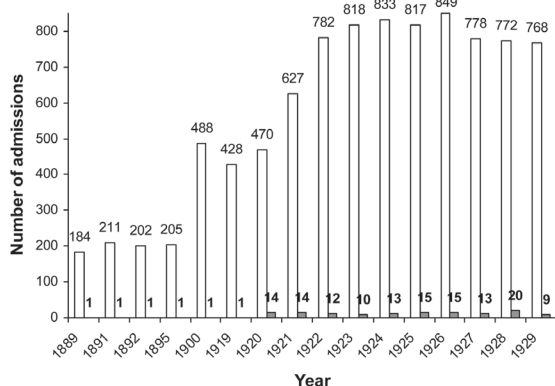


Total number of admissions to Vrapče Psychiatric Hospital for the period 1879-1929.

From 1889 to 1919, there were only 6 admissions of patients with the diagnosis of personality disorder (Figure 2). Due to an increase in the total number of admitted patients during that period, there was a relative decrease in the number of admissions for personality disorders from 0.54% to 0.20%. In 1889, 1 patient with personality disorder was admitted, out of 184 admissions that year (0.54%), while in 1929 there were 9 admissions for personality disorder out of 768 admissions that year (1.17%). Thus, the proportion of patients with a diagnosis of personality disorder increased more than 2-fold over the study period. In 1920, the proportion was even higher, ie, 2.97%.

Of the 141 admissions of patients with personality disorder, 121 (85.8%) were men and 20 (14.2%) were women

Figure 2.



Total number of admissions and the number of admissions of patients with a diagnosis of personality disorder during the 16 years of the study period. Open bars – total number of admissions; gray bars – the number of admissions with a diagnosis of personality disorder.

($\chi^2_1=70.922$; $P<0.001$). The average age of patients was 29.7 ± 9.5 years. Concerning marital status, 83 were single (59.7%), 43 married (30.9%), and 13 widowed (9.3%) (χ^2_1 test=53.237; $P<0.001$). There were 120 employed (85.8%) and 20 (14.2%) unemployed patients (χ^2_1 test=70.007; $P<0.001$). The median length of stay in hospital was 92 days (interquartile range, 92.0-127.5 days).

Overall, 87 of the 141 patients (61.7%) were sent by courts. The percentage of patients sent by courts was the highest in 1921 (92.8%), after which it gradually decreased and was 22.2% in 1929 (Figure 3).

Personality disorder nomenclature

The first term used for personality disorder was moral insanity. The first patient with this diagnosis was admitted in 1889 and the last in 1900. During the next 18 years, there were no admissions of patients with personality disorder. In 1919, the term psychopathic inferiority was in use, while already in 1920 the term psychopathy was introduced, which was the most commonly used term during the last 10 years of the study period. During these 10 years, the term psychopathy was subdivided (*psychopathia postepileptica*, psychopathia with ethic defects, psychopathy with hysterical traits, psychopathy with pathologic affect, *psychopathia shizoides*, *psychopathia gravis*, and psychopathic stupor). One patient was discharged with the diagnosis of psychopathia (*sine morbo psychico*) (Table 1).

Comorbidities

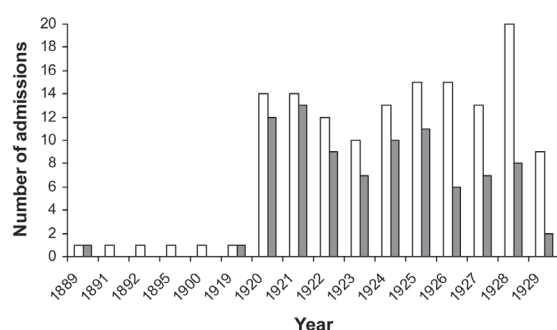
A total of 107 (75.9%) patients admitted for personality disorder were discharged with a single diagnosis of person-

TABLE 1. The number of admissions of patients with personality disorders to Vrapče Psychiatric Hospital from 1889 to 1929 and the terms used for the disorders

Term	Number of admissions in the indicated year															
	1889	1891	1892	1895	1900	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
Moral insanity	1	1	1	1	1											
Psychopathic inferiority						1					2					
Psychopathy							13	12	11	9	9	14	15	13	17	9
<i>Psihopathia postepileptica</i>							1					1				
Psychopathy with ethical defects								2								
Psychopathy, <i>sine morbo psychico</i>									1							
Psychopathic stupor										1						
Psychopathy with hysterical traits											1					
Pathological affect – Psychopathy											1					
<i>Psychopathia shizoides</i>															2	
<i>Psihopathia gravis</i>																1

ality disorder. The remaining 34 (24.1%) were discharged with one or more additional diagnoses (χ^2_1 test = 36.766; $P < 0.001$). A total of 17 comorbid diagnoses were observed. In 2 of these 34 patients (5.9%), more than one additional comorbid diagnosis was found. The most common comorbid diagnosis was substance abuse, occurring in 7 of 17 (41.2%) comorbid diagnoses (χ^2_1 test for substance abuse as a comorbidity vs other comorbidities = 3.375; $P = 0.066$). The diagnosis of Ganser syndrome (prison psychosis) was the most frequent single comorbid diagnosis, occurring in 12 of 34 patients (35.3%) (Table 2).

Figure 3.



The number of admissions with personality disorder sent by courts in relation to the total number of admissions with personality disorder. Open bars – total number of admissions with personality disorder; gray bars – the number of admissions with personality disorder sent by courts.

DISCUSSION

Between 1879 and 1919, admissions of patients with personality disorders were very rare, but after 1920 there was an increase in their number. The change in nomenclature of personality disorders was congruent with the changes reported in the literature (7,11,13). Some demographic characteristics of personality disorder patients, such as sex, marital status, average age, and employment status, differed from those reported by other authors (14-16). The majority of our patients was sent by courts, the average length of stay in hospital was about 3 months, and the most common comorbidities were substance abuse and Ganser syndrome (prison psychosis).

We found a 5-fold increase in the total number of admissions during the study period. A study in two psychiatric hospitals in Burghölzli and Rheinau, Switzerland from 1870-1930 (14), found a 3-fold increase. This difference can be explained by the larger hospital capacity of Vrapče, as well as the fact that the patient population at Vrapče increased during the study period. Concerning diagnosis of personality disorders, our prevalence of 0.74% was similar to the approximately 1% found by Meier (14) and Healy in northern Wales (15). We found a significant increase in the number of admissions for personality disorders in 1920, congruent with the results of Meier (14).

TABLE 2. The year when the first patient with a diagnosis of personality disorder and a comorbidity was admitted to Psychiatric Hospital Vrapče and the number of admissions with comorbidities

Comorbidity	Year when the first patient with comorbidity was admitted	Number of admissions with comorbidity from the first year to 1929
Morphinism	1895	1
Neurasthenia	1895	1
Epilepsy	1900	2
Imbecility	1900	1
Alcoholism	1900	2
Ganser syndrome (prison psychosis)	1920	12
Hysterical twilight state	1920	1
Pathological intoxication with alcohol	1920	3
Chronic alcoholism	1921	5
Lysteriform stupor	1921	1
Hysterical stupor	1922	1
Cocainism	1926	2
Alcoholic twilight state	1927	1
<i>Surditas</i> (deafness)	1928	1
Meningo-encephalitis <i>circumscripta chronica</i>	1928	1
Dipsomania	1928	1
Mental retardation	1928	1

The term moral insanity was used for personality disorders until the end of the 19th century, which is in concordance with the literature data (4,5,17). The term psychopathic inferiority was used for the first time in 1919, although Koch had already introduced this term in 1891 (7). Koch's definition of psychopathic inferiority was as follows: "all mental irregularities, whether congenital or acquired, that influence a man in his personal life and cause him, even in the most favorable cases, to seem not fully in possession of normal mental capacity" (7). Thus, Koch wanted to avoid the moral connotations of personality disorder; Orbinson, in his study of certain classes of prisoners, placed psychopathic inferiority under the authority of psychiatry and assigned it the same importance as major psychosis and mental deficiency (18). Psychopathic inferiority, as well as psychopathy, are mentioned on Partridge's list of 13 terms used for personality disorder (13). In 1920, at the Vrapče Psychiatric Hospital a subdivision of diagnostic terms for personality disorder occurred, using the elements of Kraepelin's (19), Schneider's (11), and some American classifications (13).

Our results on sex distribution of patients with personality disorder are similar to those of Meier (14), but different from those of Partridge, who found that 42% of their patients with personality disorder were men, which is considerably lower than our 85.8% (16). The same author found that the prevalence of married persons was 58% and the average age was 34.52 ± 11.61 years, which did not differ considerably from our results. We could not find the data on the length of hospital stay in the literature for this period. However, we did find the data on the length of stay for psychiatric patients in general during the same period, which was from 271-428 days (15). Thus, although the length of stay of our patients (92.00 ± 127.50 days) seems very long compared with the present day, it was much shorter than that of general psychiatric patients at that time.

Data about the patients sent to Vrapče Psychiatric Hospital by courts could not be found in the literature. The fact that the majority (61.7%) were sent by courts means that they had difficulties with the law, which is confirmed by the frequency of the comorbidity of Ganser syndrome (prison psychosis). We conclude from this that the most frequently recognized personality disorder at the time was dissocial. The diagnosis of psychopathy (*sine morbo psychico*) was an interesting finding. The medical records of a patient with that diagnosis state callous unconcern for feelings of others, irresponsibility and disregard for social norms, and aggressiveness; the patient committed murder but did not feel guilty (2). This indicates a probable diagnosis of

dissocial personality disorder. In spite of all these symptoms and a diagnosis of psychopathy, it was noted that the patient did not have a mental illness. This example points to the difficulty of determining the boundaries between mental illness and criminal behavior, which exists even today.

The basic limitation of our study is the questionable validity of diagnostic terms from the observed period. Even in the current classifications there are problems of extensive diagnostic overlap, limited evidence of validity, and poor empirical support (1). It is very probable that these problems were even greater in the past. Thus, the data in this article are not generalizable to a larger population.

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