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SOCIODEMOGRAPHIC AND MEDICAL CHARACTERISTICS OF INVOLUNTARY PSYCHIATRIC INPATIENTS – RETROSPECTIVE STUDY OF FIVE-YEAR EXPERIENCE WITH CROATIAN ACT ON MENTAL HEALTH

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SUMMARY – The aim of this study was to analyze sociodemographic and medical characteristics of involuntary psychiatric inpatients treated during the five-year period of implementation of the Croatian Act on Mental Health. Data on involuntarily hospitalized patients according to the Croatian Act on Mental Health were singled out from the pool of inpatients treated at University Department of Psychiatry, Sestre milosrdnice University Hospital from January 1, 1998 till December 31, 2002. Data were collected from medical records. Patients were diagnosed according to the International Classification of Diseases, 10th revision criteria. The prevalence of involuntary hospitalization was 2%, including a comparative number of male and female patients. Most patients had secondary school, were living alone, were unmarried, widowed or divorced, and did not work at the time of hospitalization; however, most patients had some kind of health insurance. Schizophrenia was the most common diagnosis in involuntary psychiatric inpatients. In conclusion, scientific evaluation of involuntary hospitalization poses a major problem because of the many different factors that can influence the prevalence of involuntary hospitalization. Some of this factors are type of institution (psychiatric hospital or psychiatry department at a general hospital), organization of psychiatric care in the region, psychiatric morbidity and dynamics of changes in psychiatric morbidity in a specific region, public opinion about people with mental disorders, legal provisions on this very sensitive topic, etc.

Key words: *Patient admission; Mental illness – legislation and jurisprudence; Hospitalization – statistics and numerical data; Demography; Hospitals – psychiatric; Croatia*

Introduction

Involuntary hospitalization is a complex social and psychiatric phenomenon raising numerous medical, legal, ethical, and even political and economic issues[1]. The medical aspect of involuntary hospitalization implies the criteria that determine the severity of the psychiatric condition and evaluation of therapy the patient is being administered. The legal-ethical aspect of involuntary hospitalization is related to the basic human rights and freedom, i.e. deprivation and restriction of movement. The position of a psychiatric patient in psychiatry institution without his/her will should be regulated by law and based on the court opinion because human freedom is regulated by the Constitution. Involuntary hospitalization is applied in cases when it is necessary to conduct treatment of a person that is unaware of his/her condition because of the nature of disorder (medical indication), for community protection from the patient's behavior (social indication) or for protection of the patient himself, e.g., suicide, self-injury, etc. (vital indication)[2].

Legislative on the patient, with special reference to involuntary hospitalization of psychiatric patients, has started to develop since the 1960s in the USA, with re-

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visions in the 1970s. Series of declarations and resolutions have been issued by the EU, Council of Europe, World Health Organization, World Association of Medical Doctors and World Psychiatry Association, in order to establish minimum standards of mental health and basic freedom, and legal rights of psychiatric patients. Standard acts on psychiatric patients currently exist in almost all modern democratic countries, e.g., since 1983 in England, 1988 in Norway, 1989 in Denmark, 1990 in Austria, Finland, France and Belgium, 1991 in Israel, 1992 in Germany, Portugal, The Netherlands, Greece and Sweden, 1993 in Russian Federation, and 1994 in Poland. In Croatia, the Act on Mental Health was enacted in 1997, and has come in force as of January 1, 1998[3-6]. According to the Croatian Act on Mental Health, involuntary hospitalization is regulated by Article 22. It means that a person can be hospitalized at a psychiatric institution without his/her agreement, if his/her mental disorder poses a serious risk for his/her own life or health or safety, or for life or health or safety of other people[7,8].

Thus, the Act on Mental Health regulates legal, medical and social aspects of mental disorders. The Act is based on juridical mechanisms ensuring juridical protection of persons that are not able to defend their interests and rights, or even protect themselves from unnecessary and sometimes even illegal psychiatric institutionalization. At the same time, this Act provides community protection because the patient may occasionally pose a risk for the community.

The aim of this study was to analyze sociodemographic and medical characteristics of psychiatric patients involuntarily hospitalized during the 5-year period of implementation of the Croatian Act on Mental Health.

Patients and Methods

Patients

Data on all patients involuntarily hospitalized from January 1, 1998 to December 31, 2002 at University Department of Psychiatry, Sestre milosrdnice University Hospital were analyzed. A total of 9839 inpatients were treated during the study period. From this pool of patients, 106 involuntarily hospitalized patients (45 male and 61 female) were admitted under Article 22 of the Croatian Act on Mental Health. Their age ranged from 18 to 78 (mean ± SD: 40.1±16.2) years.

Our department provides psychiatric care for a catchment area of approximately 80,000 inhabitants in the west part of Zagreb named Črnomerec (approximately 40,000 inhabitants) as an urban area; Zabok (approximately 23,000 inhabitants) and Jastrebarsko (approximately 17,000 inhabitants) as rural areas. The Department has 24-hour emergency psychiatric service; the staff consists of two medical doctors (senior psychiatrists and psychiatry resident) and nurses.

Protocol

According to the Croatian Act on Mental Health, two psychiatrists have to inform the court on involuntary hospitalization within 24 hours. Within 48 hours from involuntarily hospitalization, the judge and psychiatry expert should examine involuntary hospitalized patient and make definitive decision. This decision consists of the judge's judgment of the duration of involuntary hospitalization and the psychiatry expert's findings (history data, hetero-history data, mental status, description of current illness, and diagnosis).

All data were collected from two sources, i.e. patient medical files and psychiatry expertise. Sociodemographic data included patient sex (male/female), age, marital status (married, single, divorced, or widowed), living arrangement (alone/with others), level of education (elementary, secondary, and college or university), working status (employed, unemployed, or retired), and health insurance status (insured, uninsured, family insurance, or agricultural insurance). Medical variables included childhood psychiatry/psychological disturbances (positive/negative), family environment (harmonious/strained), family psychiatric disorders (alcohol or other drug dependence, schizophrenia, mood disorders, suicides, anxiety disorders, personality disorders, suicidal behavior), diagnostic category according to the International Classification of Diseases, 10th revision (ICD-10), former psychiatric hospitalizations (positive/negative), patient accompanied by (family member or relatives, police, ambulance), medication compliance, and suicidal behavior. Other data included judgment of the length of involuntary hospitalization (in days) and place of going to hospital (home/street).

Diagnoses were made according to clinical psychiatric assessment based on the ICD-10 criteria. When the patient had two or more diagnoses, he/she was assigned in the category of primary diagnosis. Group F00-F07 included organic and symptomatic mental disorders, group F10 alcohol dependence and alcohol intoxication, group F11-F19 drug dependence, group F20 schizophrenia, group F22 persistent delusional disorder, group F23 acute and transient psychotic disorders, group F30 ma-

Table 1. Sociodemographic characteristics of all involuntarily hospitalized patients (N=106), and separately for male (n=61) and female (n=45) patients

Characteristic	Total sample N (%)	Male n (%)	Female n (%)	χ^2; *P*
Marital status:				
Married	47 (44.3)	27 (60.0)	20 (32.8)	27.358; 0.001*
Single	30 (28.3)	9 (20.0)	21 (34.4)	8.388; 0.039†
Divorced	13 (12.3)	3 (6.7)	10 (16.4)	
Widowed	16 (15.1)	6 (13.3)	10 (16.4)	
Education:				
Elementary school	28 (26.4)	9 (20.0)	19 (31.1)	15.019; 0.001*
Secondary school	54 (50.9)	25 (55.6)	29 (47.5)	1.657; 0.437†
University education	24 (22.6)	11 (24.4)	13 (21.3)	
Living arrangement:				
Living alone	72 (67.9)	37 (60.7)	35 (77.8)	13.623; <0.001*
Living with other(s)	34 (32.1)	24 (39.3)	10 (22.2)	3.485; 0.048†
Employment:				
Employed	35 (33.3)	15 (33.3)	20 (32.8)	0.132; 0.936*
Unemployed	37 (34.9)	18 (40.0)	19 (31.1)	1.297; 0.523†
Retired	34 (32.1)	12 (26.7)	22 (36.1)	
Insurance:				
Insured	20 (18.9)	9 (20.0)	11 (18.0)	62.226; 0.001*
Uninsured	61 (57.5)	25 (55.6)	36 (59.0)	0.133; 0.988†
Family insurance	16 (15.1)	7 (15.6)	9 (14.8)	
Agricultural insurance	9 (8.5)	4 (8.9)	5 (8.2)	

*in whole sample; †between males and females

nia, and group F32-F33 depression[9]. When a patient met criteria for two or more disorders, he/she was assigned in the diagnostic category of primary diagnosis. The agreement between the diagnosis made by psychiatrists at emergency room and that by psychiatric experts was high (k=0.96).

Statistics

Data were processed by descriptive statistics and expressed as percent (%) and number (N) for nonparametric variables, and by mean ± standard deviation (mean ± SD) for parametric variables (age and days of hospital stay). Nonparametric variables were analyzed by use of χ^2-test and parametric variables by t-test. Statistical significance was set at $p<0.05$.

Results

The prevalence of involuntary hospitalization at our department was 2%. During the 5-year period, a total of 9839 patients were treated as inpatients, 106 of them on involuntary basis. The sample of involuntary inpatients included 42.5% of male (n=45) and 57.5% of female (n=61) patients; there was no statistically significant sex difference ($\chi^2=2.415$; df=1; p=0.121). However, there was a statistically significant age difference between male (mean ± SD: 42.1±13.9) and female (mean ± SD: 37.3±18.6; t=6.123; p=0.015) patients. There was no sex difference in sociodemographic characteristics of involuntarily hospitalized patients (Table 1), except for marital status and living arrangement. Namely, there were more female patients that were single, divorced and living alone, whereas male patients were mostly married and living with others (not alone). However, analysis of sociodemographic features in the study sample as a whole yielded a statistically significant difference in marital status, level of education, living arrangement and insurance status, showing that most of involuntary inpatients were married (44.3%), completed secondary school (50.9%), were living alone (67.9%), and were insured (57.5%) (Table 1). There was a statistically significant sex difference according to the

Table 2. Medical characteristics of all involuntarily hospitalized (N=106) patients, and separately for male (n=61) and female (n=45) patients

Characteristic	Total sample N (%)	Male n (%)	Female n (%)	χ^2; *P*
Diagnosis :				
Mania	10 (9.4)	5 (11.1)	5 (8.2)	61.698, 0.001*
Depression	13 (12.3)	3 (6.7)	10 (16.4)	32.733; 0.001†
Schizophrenia	39 (36.8)	10 (22.2)	29 (47.5)	
Dementia	6 (5.7)	5 (11.1)	1 (1.6)	
Persistent psychotic disorder	10 (9.4)	1 (2.2)	9 (14.8)	
Acute psychotic disorder	6 (5.7)	2 (4.4)	4 (6.6)	
Alcohol dependence	8 (7.5)	7 (15.6)	1 (1.6)	
Drug dependence	14 (13.2)	12 (26.7)	2 (3.3)	
Relatives psychiatric disorders:				
Alcohol dependence	16 (15.1)	10 (22.2)	6 (9.8)	44.094, 0.001*
Schizophrenia	22 (20.8)	8 (17.8)	14 (23.0)	3.985; 0.408†
Mood disorders	13 (12.3)	6 (13.3)	7 (11.5)	
Suicide	8 (7.5)	4 (8.9)	4 (6.6)	
Negative	47 (44.3)	17 (37.8)	30 (49.2)	
Childhood psychological/psychiatric disturbances:				
Positive	33 (31.1)	20 (44.4)	13 (21.3)	15.094; 0.001*
Negative	73 (68.9)	25 (55.6)	48 (78.7)	6.464; 0.010†
Family disturbances:				
Positive	57 (53.8)	22 (48.9)	35 (57.4)	0.604; 0.437*
Negative	49 (46.2)	23 (51.1)	26 (42.6)	0.751; 0.252†
Prior psychiatric treatments:				
Positive	58 (54.7)	30 (66.7)	28 (45.9)	0.943, 0.331*
Negative	48 (45.3)	15 (33.3)	33 (54.1)	4.507; 0.027†
Suicidal behavior:				
Positive	86 (81.1)	36 (80.0)	50 (82.0)	41.094; 0.001*
Negative	20 (18.9)	9 (20.0)	11 (18.0)	0.065; 0.495†
Medication compliance:				
Poor	64 (60.4)	24 (53.3)	40 (65.6)	4.566; 0.033*
Good	42 (39.6)	21 (46.7)	21 (34.4)	1.622; 0.142†

*in whole sample; †between males and females

psychiatric diagnosis as the reason for involuntary hospitalization (Table 2). Schizophrenia was the most common diagnosis in female (47.5%) as compared to male (22.2%) patients. On the contrary, drug or alcohol dependence was statistically more frequent in male (15.6% of alcohol dependence and 26.7% of drug dependence) than in female (1.6% of alcohol dependence and 3.3% of drug dependence) patients. In addition, a statistically significant difference according to diagnosis was also recorded in the sample as a whole, yielding schizophrenia as the most common (36.8%) diagnosis in involuntary inpatients (Table 1).

In the sample as a whole, a statistically significant difference was found in the variable of psychiatric disorders present in patient relatives because most patients had negative family psychiatric history (44.3%). Also, 68% of involuntary inpatients had negative childhood psychiatric or psychological disturbances, although this variable showed sex difference, since all female patients had normal childhood (Table 2). During life, there was no statistically significant sex difference in the sample according to the variable of family disturbances (Table 2). Male patients had more prior psychiatric treatments than female patients (66.7% *vs*. 45.9%).

Table 3. Place of going to hospital, accompanied by, and criminal activity of all patients involuntarily hospitalized (N=106) patients, and separately for male (n=61) and female (n=45) patients

Characteristic	Total sample N (%)	Male n (%)	Female n (%)	χ^2; *P*
Place of going to hospital:				
Street	82 (77.4)	36 (80.0)	46 (75.4)	31.736; <0.001*
Home	24 (22.6)	9 (20.0)	15 (24.6)	0.132; 0.644†
Accompanied by:				
Family member or relatives	34 (32.1)	11 (24.4)	23 (37.7)	14.566; 0.001*
Ambulance	52 (49.1)	22 (48.9)	30 (49.2)	3.941; 0.139†
Police	20 (18.9)	12 (26.7)	8 (13.1)	

*in whole sample; †between males and females

The sample of involuntary inpatients as a whole showed statistically significant sex differences in suicidal behavior (Table 2). The sample as whole as well as male and female patients in separate failed to take their medication to comply with medication prescribed (Table 2). There were a comparable proportion of involuntary inpatients with and without previous psychiatric treatment. However, there were more male than female involuntary inpatients hospitalized for the first time. There was no statistically significant sex difference in the length of involuntary hospital stay (mean ± SD: 27.7±4.4 *vs.* 27.6±4.3 days; t=0.161; p=0.689). Most patients were transferred to the psychiatry emergency office by ambulance, from the street (Table 3).

Discussion

Study results indicated the prevalence of involuntary hospitalization to be 2%. This is consistent with some literature reports, however, there are studies reporting on a higher prevalence of involuntary hospitalization in their environment. For example, a study from the United States showed that 42% of patients were involuntarily committed, in Finland 12.7% of patients were involuntarily hospitalized, whereas other Scandinavian data indicate the rate of involuntary hospitalization to range from 48% to 85%[10-12].

There are several explanations for these differences, e.g., variable implementation of legal provisions among different countries or regions, different organization of psychiatry services or institutions, etc. There are studies suggesting that these differences may be due to some paramedical factors like family pressure, cultural environment, socioeconomic status, as well as ethnic factors[3-6].

Contrary to other studies, our study showed no difference in the number of male and female involuntary inpatients. Some studies from Japan and North America found male sex to predominate in involuntary hospitalization.

In our sample as a whole, most patients had secondary school, were living alone and were single, widowed or divorced, did not work at the time of hospitalization (unemployed 34.9% or retired 32.1%) and were from an urban area; however, most of them had some kind of health insurance. These results are consistent with other studies that report on the involuntary inpatients to often live alone, being single or divorced, with secondary school education, and being currently unemployed. However, there are studies reporting on most of involuntary inpatients to have no health insurance. The relatively high rate of insured patients in our sample resulted from the Croatian health insurance and social policy, according to which the majority of the population have some kind of insurance. Also, in our country, especially in rural environment, mental illness have a stigmatizing effect, thus a lower prevalence of involuntary inpatients is expected from rural settings. According to medical variables, our results suggest schizophrenia to be the most common diagnosis in the population of involuntary inpatients; they showed poor medication compliance, were mostly taken from the street by the police or ambulance, and showed or verbalized suicidal behavior, ideas or intention. These results are consistent with literature data.

However, in our sample there was a sex difference according to diagnosis as the reason for involuntary hospitalization. Schizophrenia and drug dependence were the most common diagnoses (22.2% and 26.7%, respective-

ly) in male involuntary inpatients, whereas psychotic disorders, i.e. schizophrenia (47.5%) and persistent psychotic disorders (14.8%) predominated in female involuntary inpatients.

The present study suffered from some limitations. It was an observational study, therefore in the future it will be necessary to design a follow up study to analyze clinical outcome of involuntarily hospitalized patients in comparison with voluntarily treated patients. The study was conducted at a university department of psychiatry, in a city where there are several psychiatric departments. Some of these departments have large closed psychiatric wards and forensic departments, that are likely to have a higher prevalence of involuntary inpatients in comparison with our department[8,9]. However, our department is a good example for implementation of the Croatian Act on Mental Health at a general psychiatric department covering a large catchment population.

In conclusion, scientific evaluation of involuntary hospitalization poses a very difficult problem because of many different factors that can influence the prevalence of involuntary hospitalization. Some of these factors are type of institution (psychiatric hospital or psychiatry department at a general hospital, structure of psychiatry department, etc.), organization of psychiatric care in the region, psychiatric morbidity and dynamics of changes in psychiatric morbidity in a particular region, public opinions on people with mental disorders, and legal regulation of this very sensitive issue. Therefore, all these factors should be taken in consideration when evaluating the prevalence and characteristics of involuntary psychiatric inpatients.

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Sažetak

SOCIODEMOGRAFSKE I MEDICINSKE ZNAČAJKE PRISILNO LIJEČENIH PSIHIJATRIJSKIH BOLESNIKA – RETROSPEKTIVNA STUDIJA PETOGODIŠNJEG ISKUSTVA PRIMJENE ZAKONA O ZAŠTITI OSOBA S DUŠEVNIM SMETNJAMA

J. Potkonjak i *D. Karlović*

Cilj ove studije bio je analizirati sociodemografske i medicinske značajke prisilno hospitaliziranih i liječenih bolesnika u petogodišnjem razdoblju primjene Zakona o mentalnom zdravlju. Od svih bolnički liječenih bolesnika na Klinici za psihijatriju Kliničke bolnice „Sestre milosrdnice“ u razdoblju od 1. siječnja 1998. do 31. prosinca 2002. izuzeli smo one prisilno hospitalizirane prema Zakonu o mentalnom zdravlju. Svi podaci za analizu prikupljeni su iz medicinske dokumentacije. Bolesnici su bili dijagnosticirani prema kriterijima ICD-10. Učestalost prisilnih hospitalizacija bila je 2%. Bio je jednak broj prisilno hospitaliziranih muških i ženskih bolesnika. Većina bolesnika ima završenu srednju školu, žive sami, neoženjeni su, rastavljeni ili udovci, u vrijeme hospitalizacije nisu radili, a većina ih ima neku vrst zdravstvenog osiguranja. Shizofrenija je bila najčešća dijagnoza prisilno hospitaliziranih i liječenih bolesnika. U zaključku, problem znanstvene procjene prisilne hospitalizacije vrlo je težak zbog mnogo različitih čimbenika koji mogu utjecati na učestalost prisilne hospitalizacije. Neki od tih čimbenika su vrsta ustanove (psihijatrijska bolnica ili psihijatrijski odjel unutar opće bolnice), organizacija psihijatrijske skrbi u regiji, psihijatrijski pobol i dinamika promjena psihijatrijskog pobola u pojedinoj regiji, mišljenje građana o psihijatrijskim bolesnicima te zakonska regulacija ovoga specifičnog pitanja.

Ključne riječi: *Prijam bolesnika; Psihička bolest – zakonodavstvo i pravosuđe; Hospitalizacija – statistika i brojčani podaci; Demografija; Bolnice – psihijatrijske; Hrvatska*