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Voluntary/Involuntary Admissions/Readmissions of Psychiatric Patients in a University Hospital in Turkey From 2008 to 2016

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Abstract

Background: The treatment and hospitalization of psychiatric patients has been a dilemma for many years. Many countries have different specific legislations regarding the hospitalization and treatment of mental patients.

Objective: In the current study, 4100 voluntary/involuntary psychiatric admissions and readmissions to a university hospital in Turkey were investigated, and patient groups were compared in terms of demographic variables and psychiatric diagnoses based on DSM IV-TR.

Methods: The records of patients who had been hospitalized approximately 4–6 weeks were reviewed by two psychiatrists, and the patients were then divided into groups on the basis of single/multiple admissions and voluntary/involuntary admissions. The groups were compared based on psychiatric diagnoses.

Results: Schizophrenia was the most common diagnosis in 71.5% (n = 865) of patients with multiple admissions. The second most common diagnosis was bipolar affective disorder with 13.1% (n = 159). The rate of schizophrenia in both voluntary and involuntary hospitalizations was significant (34.5% and 54.6%, respectively). However, depression, the second most common diagnosis requiring hospitalization with a rate of 23.2% of voluntary hospitalizations, accounted for only 3.7% of involuntary hospitalizations.

Conclusion: Males constituted almost 75% of the single admission group. This difference may result from the socioeconomic and cultural profile of Turkey, as mental disorders make marriage impossible and are hidden in females suffering from them. Different findings from different cultures on single/multiple admissions and voluntary/involuntary admissions of patients lead to the conclusion that specific legislation covering treatment or hospitalization for mental disorders is needed in every country.

Keywords: Hospitalization, Voluntary, Involuntary, Readmission, Admission

1. Background

It has long been known that there is a dynamic relationship between concepts of mental illness, the treatment of the mentally ill, and the law. The World Health Organization (WHO) expert committees in mental health over the past 40 years have called attention to the need to consider legal matters in various fields of mental health including the hospitalization of mental patients and the development of community–based mental health services.[1]

In a comparative legislative survey done by the WHO in the 1970s, 43 countries were evaluated. The selection included countries of varying population sizes, levels of socioeconomic development, political systems, structures and histories, cultural backgrounds, patterns of health services, and mental health care systems.[1] Twelve countries were found to have no specific legislation covering treatment or hospitalization for mental disorders. These countries were classified as operating under informal systems. The remaining 31 countries were found to have specific mental health legislation and were classified as operating under formal systems. Unfortunately, there was no effective data for Turkey in this survey.

The Psychiatric Association of Turkey began work on a draft legislation in 1998, and the first proposal was released in 2006.[2] The proposed bill supported both the patients rights to treatment and the clinical governance in mental health settings.

The current practice in Turkey is that the family of a

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patient can either refuse admission or discharge the patient by withdrawing consent for medical service. Specific legislation for involuntary admissions is still lacking.[3]

Some studies have examined possible differences between voluntary/involuntary and single/multiple psychiatric admissions. The results of these studies are conflicting. While some researchers have indicated that there is no difference in the demographic profiles of voluntary and involuntary patients,[3,4] others have pointed out that voluntary patients are more likely to be female[5,6] and married.[6] It was indicated that involuntary patients are more likely to live alone,[3] to be male,[5] and to be elderly.[7] Conversely, in one study, the only factor that was significantly associated with involuntary readmissions was found to be ethnic group.[8] The profile of the typical patient most frequently hospitalized was described as a young, unmarried male with schizophrenia.[9]

Schizophrenia and psychosis not elsewhere classified were said to be in the subgroup with a high risk of readmission,[10,11] whereas in other investigations voluntary and involuntary patients have been described as presenting similar diagnostic profiles.[4,7,9]

These conflicting results may be explained by methodological and procedural differences in the studies due to the varied criteria across different countries. A systematic literature review on involuntary vs. voluntary hospital admission[12] stated the importance of significant variations in the methodological quality of studies coming mostly from North American and European countries. In particular, sample size estimation, lack of clear follow-up time points, and the absence of standardized instruments used to assess clinical outcomes were stated to be the main limitations of these studies. Length of stay, readmission risk, and risk of involuntary readmission were at least equal to and often greater than that of involuntary patients. Psychiatric illness expressed through aggressive behavior generally requires involuntary hospitalization. In Turkey, there is no standardized criteria or rule permitting involuntary admissions. Those persons presenting a danger to themselves or others, lacking the competence to care for themselves, or suffering from a mental disorder or psychiatric illness expressed through aggressive behavior and having been brought by police are hospitalized involuntarily upon the evaluation of a single psychiatrist.

In the current study, 4100 voluntary/involuntary psychiatric admissions and readmissions in a university hospital in Ankara, Turkey were investigated. The demographic variables and psychiatric diagnosis according to DSM IV-TR of established patient groups were compared.[13]

2. Methods

The present study was conducted at Gazi University School of Medicine, Psychiatry Department, Ankara, Turkey. The inpatient service consists of 30 beds serving adult psychiatric patients, and an average of 550-600 people stay in inpatient service each year.

The records of patients admitted to the hospital between 2008 and 2016 were reviewed by two psychiatrists. Patients under 18 years of age and less than 10 days on the day of hospitalization were excluded from the study. Patients whose socio-demographic information was lacking or whose primary diagnosis was unclear (a rare situation) were also excluded from the study. Furthermore, patients diagnosed with an anxiety disorder that could not be assessed due to a problem with the registration system were excluded from the study. All other patients were included in the study.

The records of patients admitted after 2012 were scanned from the computer registry system, while those of patients admitted between 2008 and 2012 were scanned from archived files. Primary diagnoses, age, and gender variables of the patients were obtained when the screening was performed in the computer environment. The data on single/multiple hospitalizations, voluntary/involuntary hospitalizations, educational status, and marital status of these patients was also investigated individually for each patient in the computer environment. For patients prior to 2012, data on all the variables were obtained by scanning archived files.

The patients were divided into groups on the basis of single admission (SA)/multiple admissions (MA), and voluntary admission (VA)/involuntary admission (IA). Those patients representing a danger to themselves or others, lacking the competence to care for themselves, apparently suffering from a mental disorder, and brought to the hospital by police were categorized in the IA group. Additionally, through a judicial decision, those patients who required treatment in the inpatient service and those who had no insight into their illness were included in the IA group of patients.

The pre-2012 archived records, the computer registration system between 2012 and 2016, and the records of each patient between these years were evaluated as SA, i.e. patients admitted to the inpatient service only once. Based on these records, patients who were treated more than once in the inpatient service were considered MA.

The diagnosis and demographic information of at the time of the most recent admission of patients with MA was used in this study. Similarly, voluntary or IA was assessed according to the most recent admission. Thus, each patient was included only once in the data.

Voluntary/involuntary and single/multiple admission groups were compared on demographic variables such as gender, age, marital status, and educational level. They were also compared on the basis of psychiatric diagnosis according to DSM IV-TR: (1) Schizophrenia, (2) Psychotic disorders not elsewhere classified, (3) Depression, (4) Delusional disorder, (5) Bipolar affective disorder, (6) Personality disorder, (7) Organic mental disorder, (8) Others.

In the statistical analysis, chi square tests were used to assess the differences in psychiatric diagnoses and demographic characteristics of voluntary/involuntary and

single/multiple admission patients. Statistical significance was accepted as $P<0.05$. Data was evaluated using SPSS 22.

3. Results

From a total of 4100 admissions, 70.5% (n=2890) were SA, while 29.5% (n=1210) were MA.

The distribution of diagnoses between SA and MA groups was statistically significant ($\chi^2=469.01$, sd: 7, $P<0.001$) (Table 1). Though the first 3 diagnostic groups were the same in both admissions groups, their percentages were different. While the top three diagnoses in the SA group were schizophrenia (35.6%, n=1030), bipolar disorder (22.4%, n=648), and psychotic disorder not elsewhere classified (19.9%, n=574), the percentages of these three diagnostic groups in the MA group were 71.5% (n=865), 13.1% (n=159), and 7.4% (n=89), respectively.

The demographic characteristics of the MA and SA patients were found to be different (Table 2).

In general, 68.6% (n=2813) and 31.4% (n = 1287) of patients were male and female, respectively. Among the SA patients, 74.7% (n=2159) were male, whereas 54.0% (n=654) of the 1210 MA patients were male. The percentages of female patients in the SA and MA groups were 25.3% (n=731) and 46.0% (n=556), respectively ($\chi^2=168.97$, sd: 1, $P<0.001$).

Furthermore, 24.9% (n = 721) of SA patients were in the 45–54 years of age range, whereas 26.9% (n = 325) of MA patients were in the 35–44 years of age range (χ^2 = 76.19, sd: 5, $P<0.001$).

In the SA and MA groups, 33.3% (n = 961) and 50.8% (n = 615) of the couples, respectively, were married. However, the divorce rate was as high as 28.7% (n = 828) in the SA group and only 16.5% (n = 200) in the MA group (χ^2 = 134.27, sd: 3, $P<0.001$). Most patients in both groups had a secondary level education, but more patients in the SA group (23.3%, n = 673) than in the MA group (8.5%, n = 103) had a post-secondary education level (χ^2 = 228.64, sd: 3, $P<0.001$).

From a total of 4100 admissions, 41.7% (n=1709) were VA, while 58.3% (n=2391) were IA. The distribution

Table 1. Primary Diagnosis of Single and Multiple Admissions

Diagnosis	Single Admission (n = 2890)		Multiple Admissions (n = 1210)		Total (n = 4100)	
	No.	%	No.	%	No.	%
Schizophrenia	1030	35.6	865	71.5	1895	46.2
Psychotic disorder not classified elsewhere	574	19.9	89	7.4	663	16.2
Depression	434	15.0	51	4.2	485	11.8
Delusional disorder	51	1.8	12	1.0	63	1.5
Bipolar affective disorder	648	22.4	159	13.1	807	19.7
Personality disorder	82	2.8	15	1.2	97	2.4
Organic mental disorder	47	1.6	3	0.2	50	1.2
Others	24	0.8	16	1.3	40	1.0
Total	2890	100	1210	100	4100	100

$\chi^2=469.01$, Sd=7, $P<0.001$.

Table 2. Demographic Characteristics of Patients With Single and Multiple Admissions

Demographic Variable		Single Admission (n = 2890)		Multiple Admissions (n = 1210)		Total (n = 4100)		Analysis		
		No.	%	No.	%	No.	%	χ^2	Sd	*P*
Sex	Male	2159	74.7	654	54.0	2813	68.6	168.97	1	**<0.001**
	Female	731	25.3	556	46.0	1287	31.4			
Age (y)	18–24	306	10.6	225	18.6	531	13.0	76.19	5	**<0.001**
	25–34	676	23.4	286	23.6	962	23.5			
	35–44	696	24.1	325	26.9	1021	24.9			
	45–54	721	24.9	200	16.5	921	22.5			
	55–64	331	11.5	124	10.2	455	11.1			
	≥65	160	5.5	50	4.1	210	5.1			
Marital status	Single	794	27.5	316	26.1	1110	27.1	134.27	3	**<0.001**
	Married	961	33.3	615	50.8	1576	38.4			
	Divorced	828	28.7	200	16.5	1028	25.1			
	Widowed	307	10.6	79	6.5	386	9.4			
Education	Below Elementary	94	3.3	111	9.2	205	5.0	228.64	3	**<0.001**
	Elementary	831	28.8	250	20.7	1081	26.4			
	Secondary	1292	44.7	746	61.7	2038	49.7			
	Postsecondary	673	23.3	103	8.5	776	18.9			

of diagnoses between the VA and IA groups showed a statistically significant difference ($\chi^2 = 477.03$, sd: 7, $P < 0.001$) (Table 3). While the top three diagnoses in the VA group were schizophrenia (34.5%, n = 589), depression (23.2%, n = 396), and bipolar affective disorder (22.1%, n = 377), in the IA group, schizophrenia (54.6%, n = 1306), bipolar affective disorder (18.0%, n = 430), and psychotic disorder not classified elsewhere (17.4%, n = 417) were the top three most frequent diagnoses.

The demographic characteristics of the VA and IA patients were also different (Table 4). Of the VA patients, 59.4% (n = 1016) were male, whereas 75.2% (n = 1797) of patients in the IA group were male. The percentages of female patients in the VA and IA groups were 40.6% (n = 693) and 24.8% (n = 594), respectively ($\chi^2 = 114.16$, sd: 1, $P < 0.001$).

In the VA group, 26.0% (n = 445) of patients were in the 35–44 years of age range, whereas in the IA group, the most frequently seen age ranges were 25–34 and 45–54. ($\chi^2 = 113.40$, sd: 5, $P < 0.001$).

In both the VA and IA groups, most of the patients were married. The percentage of married patients for VA and IA groups was 38.6% and 38.3%, respectively. However, the divorce rate in the IA group was as high as 28.1%, whereas this rate was 20.8% in the VA group ($\chi^2 = 196.47$, sd: 3, $P < 0.001$).

Most patients in each group had a secondary level education, but more patients in the VA group (52.9%) had a post-secondary level of education than the IA group (47.4%) ($\chi^2 = 69.37$, sd: 3, $P < 0.001$).

4. Discussion

Schizophrenia has a long-term deteriorating course and manifests itself with exacerbations; thus, it is the most common diagnosis in the MA group, as was expected. Relapse is also common with bipolar affective disorder (BAD), and BAD was the second most common diagnosis in the MA group as it was in the SA group. Many studies have investigated and identified which factors are effective in readmission to the hospital, and a diagnosis of

Table 3. Primary Diagnoses of Voluntarily and Involuntarily Admitted Psychiatric Patients

Diagnosis	Voluntary (n = 1709)		Involuntary (n = 2391)		Total (n = 4100)	
	No.	%	No.	%	No.	%
Schizophrenia	589	34.5	1306	54.6	1895	46.2
Psychotic disorder not classified elsewhere	246	14.4	417	17.4	663	16.2
Depression	396	23.2	89	3.7	485	11.8
Delusional disorder	11	0.6	52	2.2	63	1.5
Bipolar affective disorder	377	22.1	430	18.0	807	19.7
Personality disorder	48	2.8	49	2.0	97	2.4
Organic mental disorder	9	0.5	41	1.7	50	1.2
Others	33	1.9	7	0.3	40	1.0
Total	1709	100	2391	100	4100	100

$\chi^2 = 477.03$, Sd=7, $P < 0.001$.

Table 4. Demographic Characteristics of Voluntary and Involuntary Admitted Psychiatric Patients

Demographic Variable		Voluntary (n = 1709)		Involuntary (n = 2391)		Total (n = 4100)		Analysis		
		No.	%	No.	%	No.	%	χ^2	Sd	*P*
Sex	Male	1016	59.4	1797	75.2	2813	68.6	114.16	1	<0.001
	Female	693	40.6	594	24.8	1287	31.4			
Age (y)	18–24	307	18	224	9.4	531	13.0	113.4	5	<0.001
	25–34	337	19.7	625	26.1	962	23.5			
	35–44	445	26	576	24.1	1021	24.9			
	45–54	305	17.8	616	25.8	921	22.5			
	55–64	210	12.3	245	10.2	455	11.1			
	≥65	105	6.1	105	4.4	210	5.1			
Marital status	Single	409	23.9	701	29.3	1110	27.1	196.47	3	<0.001
	Married	660	38.6	916	38.3	1576	38.4			
	Divorced	355	20.8	673	28.1	1028	25.1			
	Widowed	285	16.7	101	4.2	386	9.4			
Education	Below Elementary	70	4.1	135	5.6	205	5.0	69.37	3	<0.001
	Elementary	350	20.5	731	30.6	1081	26.4			
	Secondary	904	52.9	1134	47.4	2038	49.7			
	Postsecondary	385	22.5	391	16.4	776	18.9			

schizophrenia, schizoaffective disorder, or BAD,[14,15] male gender,[16] young age,[9,14] being unmarried,[17] and involuntary hospitalization.[18,19]

Males comprised the predominate gender in both SA and MA groups. The percentage of males constituted almost 3/4th of the SA group. In a study from India, female gender was found to be predictive of readmission.[20] In contrast, the United States,[16] Canada,[14] and Israel[21] have shown that the male gender is a risk factor for recurrent admission. These differences may result from the socioeconomical and cultural profiles of the countries. In Turkey, males are expected to work and earn a living, and any intervention, like disease, receives medical help; females are expected to stay at home, so functional impairment may be hidden. Mostly in rural areas, the stigma for insanity, which makes marriage impossible, leads these mental disorders to be hidden in females suffering from them. Any relapsing disorder, like schizophrenia or BAD, necessitates medical help, and regardless of gender, people seek medical help. This tendency was seen in the MA group; i.e., the percentages of males and females were almost equal.

In the current study, 71% of MAs were diagnosed as schizophrenia. In many studies, schizophrenia was recognized as a risk factor for readmission.[14,15] These results are consistent with those of the current study. In addition to schizophrenia, BAD[15] and personality disorder[22] were also identified as risk factors. The age range of 35–44 years seems to be the most frequent group in which MA take place, and the frequency of admissions declines in older ages. This results seems to stem from the nature of schizophrenia, where negative symptoms predominate and positive symptoms fade in the late course of the disease. In the SA group, there was not much difference among age groups; this result may arise from the homogeneity of the diagnostic groups; i.e. the percentages of schizophrenia, BAD, depression, and psychotic disorder not elsewhere classified are closer to each other, whereas in the MA group, schizophrenia alone made up 3/4th of all diagnoses.

Psychiatric disorders with psychotic features in which reality testing is disturbed (schizophrenia, psychotic disorder not classified elsewhere, and BAD) are more common in IAs, as was expected. IAs present at younger ages when schizophrenia usually first becomes evident. In agreement with the literature, male patients dominated the involuntary patient group.[5,6,23,24] No difference in marital status of patients was observed with regard to voluntary and IAs, but divorced patients made up the greater portion of the involuntary patient group.[3,4] In a study from Turkey, it was found that patients who were not married are prominent in the involuntary group.[23] In the current study, married people in both the VA and IA groups comprised the highest ratio. While the percentage of divorced couples in the VA group was 20.8%, it was found to be 28.1% in the IA group (Table 4). The cultural structure of Turkey favors early marriage, that is, before the disease manifests itself, and the disease is usually accepted as faith so that families usually sustain their marriages. Fewer patients in the IA group had a post-secondary education, which may be the result of a disease intervening at early years of life, but low education level itself may also play a role in the lack of insight and failure to seek medical help, which may result in IAs.

In the current study, 58.3% of all psychiatric inpatient admissions were IAs. This rate is quite high compared to that of countries in the European Union. A study evaluating admissions between 1990-2000 reported that IAs comprised 5.8% in Belgium, 12.5% in France, 4.6% in Denmark, 17.7% in Germany and 21.6% in Finland[25] of all psychiatric inpatient admissions. In Turkey, the total number of psychiatric inpatient services is inadequate compared to the number of psychiatric patients. Therefore, the admission of people with severe mental illnesses (psychotic disorder, bipolar affective disorder etc) has a greater priority for hospitalization than other mental illnesses. Those with severe mental illnesses have been reported to have higher rates of Ias.[8,26] Hence, the high rate of IAs in Turkey seems to be due to the more frequent hospitalizations of those with severe mental illness.

In the current study, the subdiagnostic groups of BAD and personality disorders have not been investigated. Manic patients and depressive patients may differ in their admissions to the hospital. However, in a study evaluating 1374 BAB patients, 76.2% of those with voluntary admission and 84% of those with IA were in the mania period.[27] Although this study found that the rate of involuntary hospitalizations of manic patients was somewhat higher than that of voluntary hospitalizations, the rates may be close. It is a known fact that patients in the manic period are more agitated and aggressive. This can increase the involuntary hospitalization rate.

The patients in this study were included based only on the primary diagnosis. Comorbid psychiatric and physical illnesses were not evaluated. Alcohol and drug addictions are more common in patients with involuntary hospitalizations. This disease group is sometimes seen as a primary disease and sometimes other psychiatric diseases as comorbid. The fact that this diagnostic group is not evaluated indicates the limitations of the study.

In addition, it has been reported that treatment compliance, type of medication used in treatment, family support, socioeconomic status, and presence of positive symptoms in psychotic disorders may change both the number and the type of hospitalizations. The lack of data on these variables in the current study can be seen as a limitation.

In future studies, variables such as drug adherence, a single diagnostic group, family support, medication used (antipsychotic/antidepressant/anticonvulsant and subgroups, etc), comorbid alcohol/substance use, content of symptoms (positive/negative symptoms, etc) may be studied.

5. Conclusion

When all findings are evaluated together, it is obvious

Research Highlights

What Is Already Known?

Treatment and hospitalization of psychiatric patients has been considered to be a dilemma for many years. Many countries have different specific legislations for hospitalization and treatment of mental patients. Over the past 40 years the WHO Expert Committees in mental health have called attention to the need to consider legal matters in various fields of mental health including the hospitalization of mental patients and the development of community-based mental health services.

What This Study Adds?

A significant proportion of the multiple admissions in Turkey were found to be caused by schizophrenia patients. There is currently no full legal arrangement for hospitalization and treatment of these patients. In the present clinical practice, the approval of the family is crucial for the patient's admission to the hospital. There are still serious shortcomings in the legal regulations on involuntary hospitalizations. In this study, emphasis was placed on the lack of legal regulations on mental illnesses that were a significant number of hospitalizations.

that involuntary hospitalizations are more frequent than voluntary hospitalizations. In addition, a vicious circle is formed when it is thought that this patient group is in MA. The absence of a legal regulation for this situation, which constitutes a significant part of psychiatric inpatients, creates both medical and legal problems.

There is no strict consensus on the involuntary hospitalization of mental patients in Turkey; thus, these results cannot be generalized for all of the country, but they can give some idea of the characteristics of the involuntarily/voluntarily admitted patients. Moreover, the results point out the necessity of specific legislation covering treatment or hospitalization for mental disorders.

Authors' Contributions

Study design: BG, BC, SC; Data collection and/or processing: BG, BC; Manuscript writing: BG, BC, SC, NG; Statistical analysis: BG; Literature review and critical revision: BC, SC, NG.

Conflict of Interest Disclosures

None.

Ethical Approval

The ethical approval of the study was obtained from the Gazi University Ethics Commission.

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