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# The Most Frequent Psychiatric Disorders Registered at Day Hospital of Psychiatric Clinic in Sarajevo During 2006–2007

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## SUMMARY

Day Hospital is an alternative to inpatient treatment as a transition from hospital to outpatient type of treatment, especially for those patients who cannot quickly return to the family, and patients who are unable to leave the usual social contacts so to them the hospitalization will pose a great mental risk. The aim of the research is to determine the structure of psychiatric morbidity, as well as demographic features and duration of hospitalization in patients treated at a Day Hospital of Psychiatric Clinic in Sarajevo during the period 2006–2007. The survey is conducted at the Psychiatric Clinic, Clinical Center of Sarajevo University as retrospective, based on observations of certain variables (gender, age, hospitalization duration), and the number of diagnosis. The results of the research show that the total number of registered patients in the observed period is 400. During the two year study there were more female (61.3%) than male patients (38.7%). Also, during the two years of research, most of those were with one diagnosis. The average hospitalization duration was 45 days, and the most often hospitalization duration was from 1 to 3 months. During both years, mostly present was the population in age group 46 to 65 years, followed by age group 26 to 44 years. Leading diseases during both years of research were from the group F30–F39, and the most common co-morbid diseases from groups: F30–F39, F40–F49 and F60–F69. We can conclude that Day Hospital has great significance in the mental health prevention. Daily structured program provides hospital diagnosis, treatment and rehabilitation of persons of both genders from different age groups and with diverse psychopathology.

**Keywords:** day hospital, diagnosis, demography, hospitalization duration

## 1. INTRODUCTION

Psychiatric Day Hospital (DH) is an alternative to inpatient treatment as a transition from hospital to outpatient type of treatment, especially for those patients who cannot quickly return to the family, and patients who are unable to leave the usual social contacts so to them the hospitalization will pose a great mental risk.

The idea of forming a Day hospital occurred for the first time in 1933 in the former Soviet Union out of necessity to organize “semi stationary” that would relieve Hospital

facilities of a large flow and pressure of the patient. M.A. Dzagorov during 1934–35 founded the first Day hospital, initially in the hospital „Imeni Solovjeva“, and later at the Preobrazenska hospital in Moscow (1). After that began to work the first Day hospital in Leningrad at the Institute Behtereva. E. Cameron, Canada in 1946 year and two years later, J. Bierer, England, founded the first psychiatric day hospitals in the West.

The first Day hospital in the former Yugoslavia was established at the Institute of Mental Health in Belgrade in 1963. Volovik and Kocjubinski in 1973 claimed that Day hospital can meet all the requirements of diagnosis, treatment and prophylaxis, social work and rehabilitation of mental patients (2).

Day Hospital at the Psychiatric Clinic exists since 1978. The treatment team of Day hospital is consisted of four psychiatrist, two senior nurses, and a nurse. Present are all known methods of group treatment with an emphasis on techniques and activities that are performed in the context of the therapeutic community with the aim of “learning about themselves and others through a common experience in life situations and the realities of everyday life.” In addition to significant economic benefits, partial hospitalization provides intensive treatment and psychosocial rehabilitation in the existing family and social milieu of the patient. Applied is the integrative and multimodal psychotherapeutic approach with the following procedures: pharmacotherapy, psychotherapy, art therapy, reading therapy, music therapy, and social therapy, occupational and recreational therapy. Implement is also special group psychotherapy for patients with psychotic, neurotic, stress related disorders and personality disorders.

The largest number of psychiatric patients can be treated in conditions of partial hospitalization, which is identical to the effectiveness of inpatient stationary treatment in psychiatric institutions, but is significantly cheaper (3). For patients who are employed are also organized the night or weekend hospitals (4). Treatment is integrative

and individually-oriented approach to the assessment of cognitive, behavioral and mental characteristics of the patient. Today the indications for admission to the Day hospital are wide: schizophrenia, affective disorders, and all patients in categories with psychosis (except homicidal paranoid patients), all forms of neurosis, personality disorders and psychosomatic illnesses, patients from the category of substance abuse (2). The example of Day hospital in the Medical Center at Vinkovci for nervous and mental diseases, we can see the importance of day hospitals in improving mental health. Another example is the Day Hospital Vrapče for alcoholism and other addictions founded in 1997. Therapeutic community has 12 to 17 members of various ages and from different population groups (5). Treatment at a Day hospital slows development of chronicity and the appearance of the negative consequences of full hospitalization. Looking from an economic point of view, this kind of treatment is considerably cheaper than “full” hospitalization. In terms of a partial hospitalization also is possible highly specialized scientific research in psychiatry (7).

The aim of our study was to determine psychiatric diagnostic entities in subjects treated at a Days hospital of the Psychiatric Clinic of Clinical University Center in Sarajevo during 2006 and 2007.

Research tasks are: to determine the total number of patients in the period 2006 and 2007 in Day hospital of the Psychiatric Clinic Sarajevo; analyze gender structure of patients by years, to analyze the age of the respondents, to examine the duration of hospitalization, to determine the first diagnosis and co morbidity.

**2. MATERIAL AND METHODOLOGY**

Subjects of this research are the patients of the Day hospital in Sarajevo in the period from January 1st 2006 until December 31st 2007. Total number of 400 patients is included in research. Research methods used are epidemiological retrospective, analytical and of descriptive nature, based on observation and analysis of relevant variables. Monitored variables are: gender, age, duration of hospitalization and the number of set diagnoses. Necessary data were collected from the patient protocols and patient charts, and the results are displayed graphically and in tables.

**3. RESULTS**

During 2006 there were 202, and in 2007, 198 patients treated at the Day hospital (400 respondents). From the baseline (400), in 2006 there were 77 (38.1%) male patients and 125 (61.9%) female. In 2007 there were 78 (39.4%) male patients and 245 (61.3%) female. During both years of research the average age of respondents was about 49 years (the largest number of respondents at age group 46-65 years, while there were no respondents younger than 25 years in 2006 and also with minority in 2007). There are no statistically significant differences in relation to age between the observed years.

Review of number of set diagnosis (treated at the Day Hospital of the Psychiatric Clinic, Clinical Center of Sarajevo University) during the period studied					
Number of diagnoses		Years		Total	
		2006	2007		
1.	N	124	143	267	
	%	61.4	72.2	66,8	
	2.	N	65	37	102
		%	32.2	18.7	25,5
3.	N	13	18	31	
	%	6.4	9.1	7,8	
	Total	N	202	198	400
		%	50,5	49.5	100.0

Table 1. Overview of the set diagnosis (which are treated on a Day Hospital of Psychiatric Clinic Sarajevo) by years of research,  $\chi^2=9.806, p=0.007$

Average duration of hospitalization in days, during both years of research is 45 days (1-3 months), with the shortest duration of hospital stay of 1 day and maximum of 406 days.

Table 1 shows that in 2006 there was 124 (61.4%) of patients with one diagnosis, 65 (32.2%) with two, and 13 (6.4%) had three diagnoses. In 2007 there was 143 (72.2%) patients with one diagnosis, 102 (25.5%) of those with two, and 31 (7.8%) had three diagnoses. The difference between these years of research in relation to the number of present illness is statistically significant ( $p = 0.007$ ).

Figure 1 shows the specific diagnostic entities in the years of research. From the statistical analysis of diag-

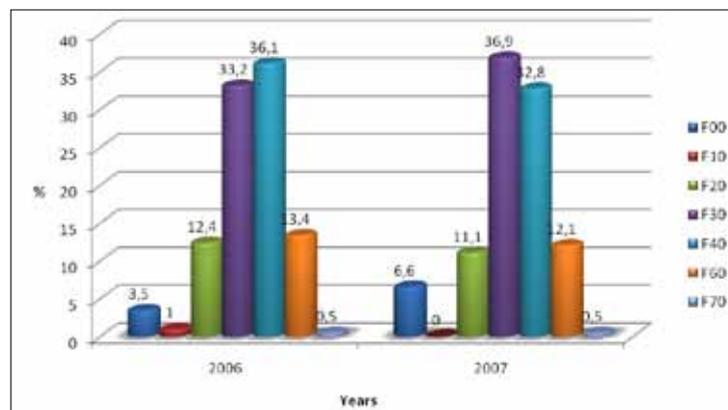


Figure 1. Leading diagnosis,  $\chi^2=4.849, p=0.563$

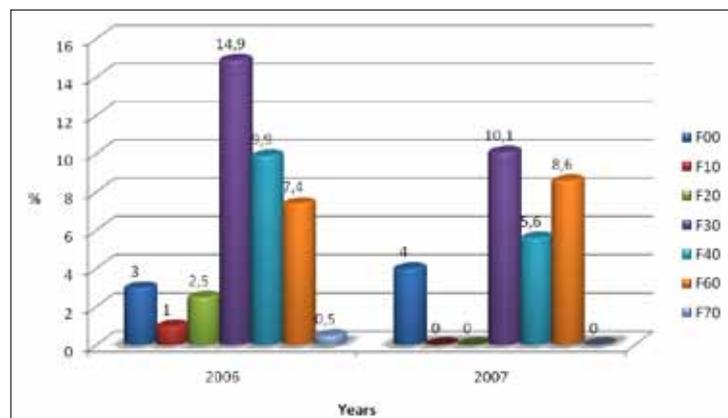


Figure 2. Most often co morbid diagnoses  $\chi^2=14.347 p=0.045$

nostic groups between the observed years we can see that between them there are no statistically significant differences in the frequencies.

Figure 2 shows that during these two years the leading group of disorders was F30-affective disorders (mood disorders) and more during 2006, but during 2007 there was more disorders from the group F40-F49, F10-F19 and F20-F29, while during the 2007 there was more from the group F00-F09 and F60-F69. Statistical analysis shows significant differences in mental co morbidity between researched years.

#### 4. DISCUSSION

Psychiatric Day hospital is an institution for partial hospitalization, and as such offers an alternative to 24h hospitalization. In the Day hospital are treated patients with various forms of mental illnesses such as schizophrenia, manic-depressive psychosis, neurosis, personality disorders, etc. In this research, we carried out the analysis of diagnostic entities registered in the Protocol of Day hospital of the Psychiatric Clinic Sarajevo in the period 2006–2007, based on the total morbidity sample. The analysis determined that the total number of respondents in the period from January 1st 2006 until December 31st 2007 was 400. During both years of research more represented are female respondents in 2006, 125 (61.9%), and in 2007–120 (60.6%), while there was during 2006–77 (38.1%), and during the 2007–78 (39.4%) male patients. Statistical analysis using Chi-square test shows that among the groups there is no statistically significant difference ( $p = 0.794$ ).

In the study by the group of authors we found similar results, which show that women was during three years over-represented compared to men, and that in the total number of respondents 592, in 2004 women were represented with 54.3% and during 2006 62.7% (2, 6). With regard to the gender of the respondents perceived is the increase in number of female patients who lost their jobs since 1992 or later (6).

In our study we found that in 2006 there was 124 (61.4%) patients with a diagnosis of one disorder, then 65 (32.2%) patients with two the diagnosis, and 13 (6.4%) of patients with three the diagnosis. In 2007 there was 143 (72.2%) patients with one diagnosis, 102 (25.5%) patients with two the diagnosis, and 31 (7.8%) of patients with three the diagnosis. Differences in these years of research in relation to the number of diagnosis was statistically significant ( $p = 0.007$ ). The results show that the relevant world studies results are similar to ours, and that among the diagnosed diseases are the leading group F30-F39 (2, 6).

In our study during both the years 2006 and 2007 most patients were from the age group 46-65 years and in 2006 there was 157 (77.7%), and 2007 139 (70.2%). After them come patients from age groups 26-44 years in 2006 with 44 cases (21.8%) and in 2007 with 55 cases (27.8%). Between observed groups there is no statistically significant differences by age ( $p = 0.153$ ).

In the study by the group of authors the average life span in comparison to 2004 year rose by almost three

years as a result of the increasing number of patients in the age group 51-60 years, and that authors state the reduction in number of patients in younger age groups (6). There is significant statistical difference in terms of increasing number of older patients. Such a result could be explained by the difficult existential situation in the current transitional period in which our country is (6).

The results of our study show that the average duration of hospitalization during 2006 and 2007 was 45 days. During both years the most common duration of hospital stay was 1 to 3 months, during 2006 at 165 or 81.7% of patients, and during 2007 with 168 or 84.8% of patients. Based on the results we can conclude that there was no statistical significant difference regarding the duration of hospitalization. Research by other authors show noticeable reduction in the duration of hospitalization since 2004 until 2006, and as a reason list the increase in the number of hospitalization which takes 1 to 6 months, and the lack of hospitalization longer than 6 months (6, 9). Duration of hospitalization was significantly reduced, which could also be explained with the quality of clinical work (6). Psychopharmacology development has led to deinstitutionalization and there has been a rapid release and rapid admission of the psychiatric patients. So in the US since 1995 until the 1997 the number of hospitalized decreased from 40% to 9%. As the authors say, patients who have functioned well in the past, require a brief hospitalization, which is related to the situation in crisis (2).

In our study we found that during both years (2006 and 2007) leading diagnoses are from the group F30-F39 in 2006 with 67 (33.2%) patients, and in 2007 with 73 (36.9%) patients. In second place there are diseases from the group F40-F49, in 2006 with 73 (36.1%) patients and in 2007 with 65 (32.8%). Disorders that are the least represented are from the group F70-F79 during both years of research with only 0.5%. Comparing diagnostic groups between the observed years we see that between them there is no statistically significant difference ( $p = 0.563$ ).

Group of authors in their study had similar results, and with them in the first place are also disorders from the group F30-F39, then F40-F49 and F60-F69 (6, 10, 11). In our survey most respondents had co morbid diagnoses during both years were from the group F30-F39, during 2006 in 30 cases (14.9%), and during the 2007 in 20 cases (10.1%). During 2006 there were more disorders in group F40-F49 with 20 cases (9.9%), and F20-F29 with 5 cases (2.5%). During the 2007 are present disorders from group F00-F09 with 6 cases (3.0%), F69 and F60–15 (7.4%). Analysis of co morbid diagnosis indicates the existence of a statistically significant difference between the observed years of research. The study by the group of authors found similar results, and with them most often co morbid diagnoses are from the group F30-F39 and F60-F69 (5, 12).

#### 5. CONCLUSION

Based on the analysis of diagnostic entities that are registered in the Protocol of Day Hospital of Psychiatric Clinic Clinical Center of Sarajevo University 2006/2007, we can conclude the following:

- Total number of patients in the period from January 1st 2006 until December 31st 2007 was 400.
- In the period studied there were more female patients (2006–61.9%, and 2007–60.6%), at age group 46 to 65 years, followed by age group 26 to 44 years.
- The average duration of hospitalization was 45 days; most frequent duration of hospitalization was from 1 to 3 months.
- During the two years of research, most of the patients were with one diagnosis.
- Leading diseases during both years of research were from the group F30-F39.
- The most common co morbid diseases come from groups: F30-F39, F40-F49 and F60-F69.
- Day hospital belongs to the present and future and represents a significant solution to link the community and traditional psychiatry.

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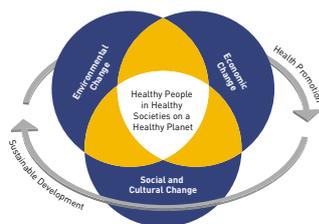
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