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DEPRESSIVE DISORDER IN PSYCHIATRIC IN-PATIENT CARE

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Abstract:

Depressive disorder is a main nosological category represented by a wide range of symptoms and high frequency of occurrence. This heterogeneous entity makes it difficult to find a relationship between certain mood disorders between a clinical viewpoint and biological changes. **Material and methods:** We performed a retrospective study by investigating 3,245 cases with depressive disorder hospitalized in the University Clinic of Psychiatry Craiova during 2005 – 2009. **Results:** It can be noticed a linear increase of the number of cases with depression during the study period. Females of 40 – 60 years-old, urban residence and secondary education level seem to be the most exposed. Generally, patients had a good evolution. **Discussions:** We found highly significant difference of gender distribution according to the age of patients, area of residence, marital status, level of education, onset of the disease, severity of depression and number of admissions. **Conclusions:** Considering the continuous growing number of the cases of depressive disorder, the highlighting of vulnerability markers becomes an important desideratum.

Key-words: depression, symptoms, risk factors

Rezumat:

Tulburarea depresivă constituie o categorie nosologică psihiatrică reprezentată printr-o largă paletă de simptome, cu o prevalență din ce în ce mai frecventă. Datorită eterogenității manifestărilor, stabilirea unei relații de certitudine între semnele clinice și modificările biologice reprezintă o piatră de încercare pentru psihiatrul clinician. **Material și metodă:** Am realizat un studiu retrospectiv pe

3.245 cazuri de pacienți cu tulburare depresivă spitalizați în Clinica de Psihiatrie Craiova, în perioada 2005 – 2009. **Rezultate:** Am remarcat o creștere liniară a numărului de cazuri cu depresie pe durata intervalului de studiu. Femeile cu vârstă între 40 și 60 ani, mediu de rezidență urban și nivel mediu de educație par a fi segmentul de populație cel mai expus la apariția tulburării depresive. Per ansamblu, pacienții au avut o evoluție favorabilă. **Discuții:** S-au semnalat diferențe semnificative pe sexe după vârsta pacienților, mediu de rezidență, statutul marital, nivelul educațional, modalitatea de debut, severitatea depresiei și numărul de internări. **Concluzii:** Având în vedere creșterea continuă a numărului de cazuri de depresie, evidențierea factorilor de risc devine un deziderat tot mai important.

Cuvinte-cheie: depresie, simptome, factori de risc

INTRODUCTION

Depressive disorder has always been a major challenge for both specialists and patients because of its clinical and therapeutic characteristics of social impact, on one hand and because of individual suffering with functional impairment, on the other.

As a disease renowned for its growing global prevalence, depression is also one of the most studied fields in psychiatry, from an etiopathogenic, clinical, therapeutic and epidemiological point of view (Nemeroff, 2005). Important development in fundamental research has led to an easier interpretation of the mechanisms of depression causation by paving the way for new antidepressants that should be more efficient and with minimal side-effects (APA, 1993). Information, increased accessibility and advancement of therapeutic protocols were several measures that improved the performance standards in the therapy for depression.

From an epidemiological point of view, over 10 % of patients presenting to their family physician suffer from depressive disorder (Katon, 1992; Hirschfeld, 1997). Epidemiological research finds it difficult to establish a precise incidence and prevalence of depression not only because of its permanent complexity in designing and conducting a particular study, but of the cultural specificities of various population groups, as well. As a matter of fact, disagreements among epidemiologists confirm the existence of these problems. Depression remains one of the most under-diagnosed diseases. It is estimated that only 25 % of patients that present depressive symptoms would seek professional help (DeWester, 1996; Rush, 1993). However, the empirical value of a well-designed, properly-conducted epidemiological study should not be minimized. The so obtained results have an undeniable value in order to understand the evolution of depressive disorders within a population and can constitute a theoretical basis to improve mental health services.

As a conclusion, I have reckoned that an attempt to find certain associations in the evolution of depressive disorder signs and the current practice of the psychiatric clinic would be very appropriate.

MATERIALS AND METHODS

I used the method of retrospective study and statistic analysis by investigating the cases of depressive disorder for particular nosological entities hospitalized in the Psychiatric Clinic of Craiova in the time period 2005 – 2009.

Group N comprising 3.245 patients was selected from all hospital admissions and it was formed according to the following inclusion criteria:

- Symptoms and nosological classification should comply with ICD-10 diagnosis criteria;
- Complete data in the case report forms regarding the studied items should be in accordance with criteria for authenticity and plausibility in depressive disorder assessment.

In this light, the following variables were drawn from the case reports: gender and age groups, area of residence, marital status, level of education, type of onset, associated psycho-traumatic factors, nosological framework, duration of hospitalization, heredo-collateral history, evolution, existence/absence of suicidal attempts.

Clinical and statistical data highlighted particular features of depressive disorder so as to identify risk factors and specific prognosis.

RESULTS

Percentage of group N

The number of 3.245 admissions for depressive disorder accounted for over 40 % of all admissions at the Psychiatric Clinic during the respective period of time. In this respect, it can be noticed a trend towards a linear increase in the percentage of depression cases every year (Fig. 1).

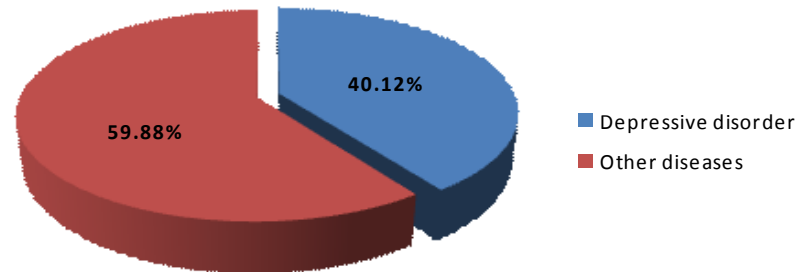


Fig. 1. Percentage of *N* group out of the total number of admissions during the period of research

Sex and Age Groups

On age group repartition of patients with depressive disorder, we notice that more than half of the patients fall into the category of 40 – 60 years old, a vulnerable age period exposed to both exogenous factors (difficulties in adapting to changes in the social and economic status-unemployment, insecurity of a permanent job, financial problems, retirement, etc.) and endogenous factors (biological and endocrine changes peculiar to both men and women during preinvolutionary period) (Fig. 2).

Moreover, we notice that young ages are not strongly represented since it has been found a striking increase in depressive disorder among patients over 30 years old. A significant percentage is also registered in the category of over 60 years old, where, if we take into account clinic symptomatology, depression was almost invariably accompanied by signs of cognitive deficit.

On gender distribution, females have the highest preponderance at all age groups, except for those over 60 years old, emphasizing the existence of problems of adaptation to everyday life which prove to be more relevant to males included into this age category. The most poignant difference between the two sexes lies in 31 – 45 age period, meaning that females are five times more numerous than males.

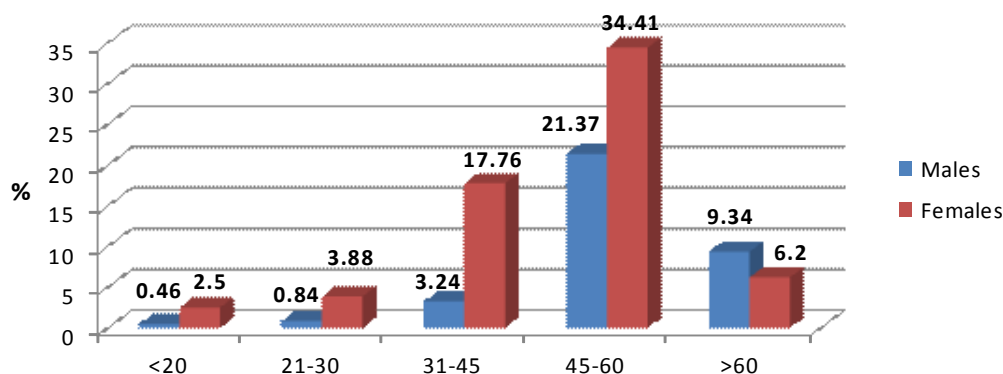


Fig. 2. Distribution of the study group *N* on gender, according to the age group

Area of residence

The distribution of the patients on residence area highlights a twice higher prevalence of patients from the urban area, stressing however the fact that the number of patients from rural areas met a continuous increase in the studied time period (Fig. 3).

The trend could be explained by considering that the inhabitants from urban areas, in comparison with those living in rural areas, have easier access to specialized services due to a superior mental health care system so diagnosis and hospitalization are determined accordingly, with more

expertise and readiness. This is not always possible in rural areas and there are several arguments to support this idea, such as: demand for psychiatric consultation and hospitalization- only when serious cases are concerned, being mostly accompanied by symptoms of addiction.

On gender distribution, females have a higher preponderance in both areas of residence; however the difference is more visible in the urban areas. The fact could be explained by the higher addressability of women who are more vulnerable to biological changes that occur at specific moments in life, to medical services, in general and psychiatric services, in particular.

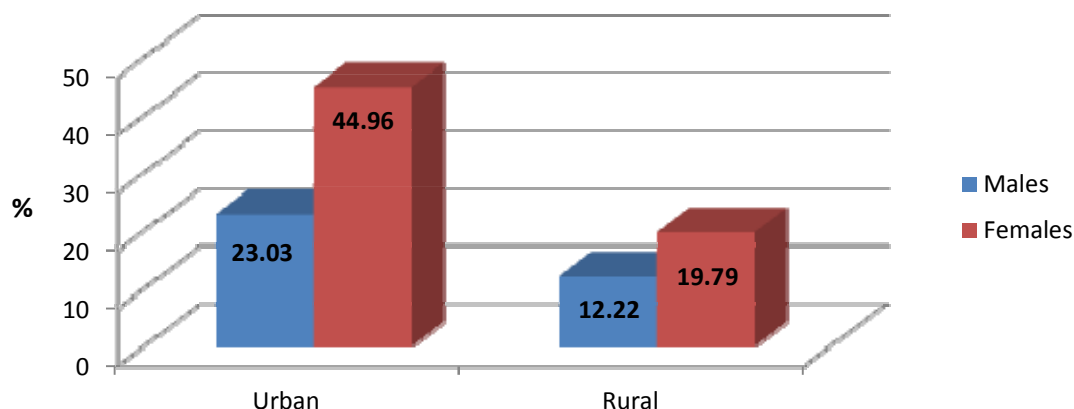


Fig. 3. Distribution of the study group N on gender, according to the area of residence

Marital Status

The high percentage of married subjects – around 70.68 % of the group is in direct ratio to the representation of this category in general population (Fig. 4). Generally, the group of unmarried subjects was represented by subjects aged under 30, the male number is thrice higher than that of female in this category.

In terms of mental balance, it is clearly to state that marriage provides greater advantages for men than women, idea which is endorsed by the fact that higher depression rates were found in divorced and widowed patients, rather than in married ones.

As demonstrated, more than half of the group is represented by married women, suggesting that they are currently facing stressful situations at home and financial problems. Single women are, supposedly, “protected” from depressive disorder.

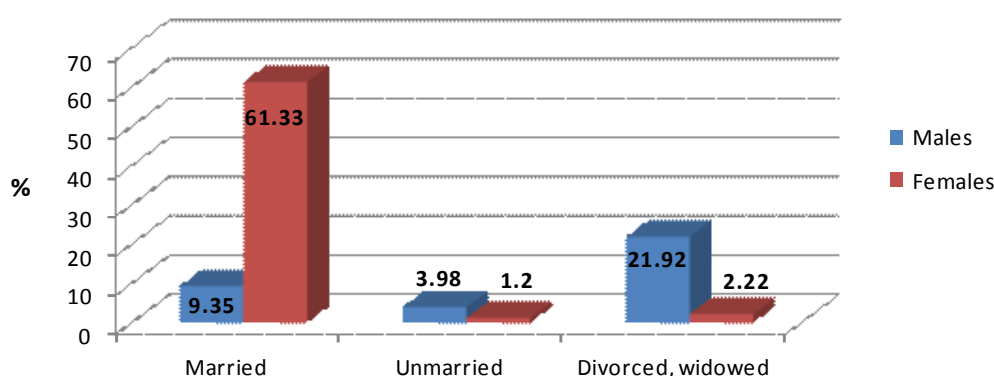


Fig. 4. Distribution of the study group N on gender, according to marital status

Levels of Education

As to the distribution of patients with depressive disorder according to their level of education I have noted that almost half of the group has secondary studies (high school) and they represent a category with the highest percentage, as related to general population (Fig. 5). The sum of individuals with no higher education accounts for over 3/4 of the group of study. This can be explained by both economic and financial difficulties that these categories are currently facing, as to the gap

between personal aspirations towards socio-professional achievement and the efforts they put into achieving them.

On gender distribution, patients with elementary education are mainly females, more than half of the members of the group, allowing us to notice that they are more likely to suffer from depression, due to a certain degree of monotony and social deprivation.

Intellectuals, with a relatively similar gender distribution, are often affected by depressive disorder. So, depression occurs when the actions they carry out are incongruent with their abilities and desires. In addition, people at a young age (students) display depressive symptoms that were provoked by poor performance in school (especially during the first years of study), romantic disappointment.

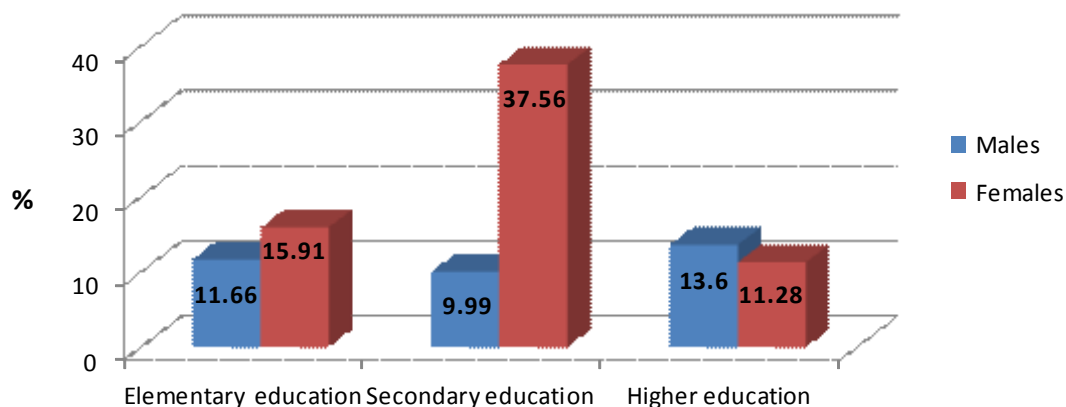


Fig. 5. Distribution of the study group N on gender, according to the level of education

Type of onset

The clinical aspect of onset, registered in the clinic's case report forms, allowed us to notice that symptoms appeared insidiously in 75.21 % of patients (Fig. 6). As to this type of onset, females had a larger representation. The first depressive episode occurred after a first psychiatric hospitalization, due to unspecific symptoms, such as irritability, chronic unease, fatigue and bodily changes, objectivized by psychosomatic dysfunctions, so the patients were referred to other medical specialties (internal medicine, endocrinology, cardiology, etc.).

We have noticed that the same category also included first depressive episodes at young age ("depressive equivalents"), characterized by sleep disorders, loss of appetite with significant weight loss, fatigue with decreased concentration, poor performance in school, rarely antisocial acts (theft, the act of running away from home, various forms of addiction), the latter requiring differential diagnosis with schizoaffective disorder and personality disorders.

Sudden onset, with frequent impact on men, was characterized by the existence of psychotic features sometimes accompanied by suicidal attempts. Usually, this type of onset occurs in old age and is followed by heteromorphic psychotic symptoms: anxiety and anguish, micromanic delirious ideas, anorexia or bulimia, confusional states.

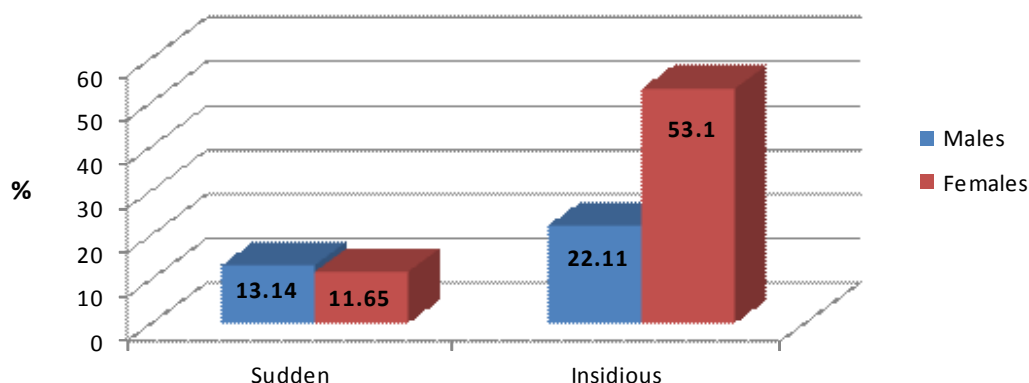


Fig. 6. Distribution of study group N on gender, according to the type of onset

Nosological framework

Figure 7 shows the linear upward-sloping curve of severe depressive symptomatology in patients from the sample group N. The relatively small number of cases with low and medium intensity of symptoms can be explained by the clinic's emergency profile, most patients in this category are directed to ambulatory and semi-ambulatory psychiatric care services.

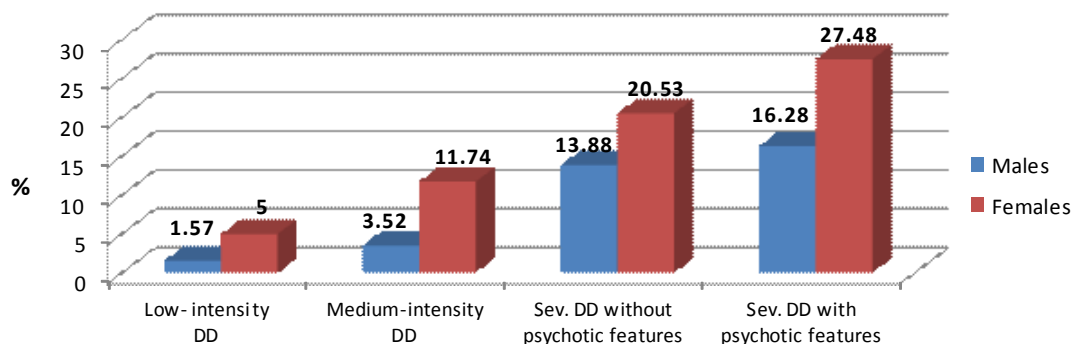


Fig. 7. Distribution of the study group N on gender, according to the nosological framework

More than three-quarters of patients were subsequently found to be suffering from major depressive disorder, with or without psychotic features. Major depressive disorder is characterized by the presence of various symptoms, as lasting depressive mood and ideation, major adaptive deficit and, at the cases with psychotic features, the patient presents delirious persecution ideas, suicidal and parasuicidal behaviour and often feels a sense of guilt.

On gender distribution, the number of female patients prevails in all nosological categories, over 1/4 of the group being made up of patients with severe depressive disorder with psychotic features.

Duration of hospitalization

The distribution of patients on the duration of hospitalization revealed that the majority of subjects were admitted to the clinic for a period of 2 or 3 weeks. A small number of cases comprising patients with low intensity depressive disorder needed less than 10 days of therapy in hospital.

Patients with more than three weeks admissions were usually cases that presented a longer evolution of the disease, more severe symptoms, therapeutic resistance, long-term treatment with tricyclic and tetracyclic antidepressants and electroconvulsive therapy, as well as low socio-familial support. In this type of patients, the quasi-constant presence of psychotic features, though sometimes discordant, imposed a real need for the association of antipsychotic drugs, especially olanzapine (Fig. 8).

A small number of patients (less than 10 %), most of them not benefitting from an adequate familial support, were transferred to the hospital for chronic disease, whereas over 25 % of patients benefited from enhanced results of the treatment provided by the clinic's day hospital.

On gender distribution, it has been noticed that long-term admissions are similarly distributed, considering those patients with a longer evolution of the condition, symptoms resistant to therapy, multiple relapses and interepisode residual psychotic features. A significant number of these cases needed immediate transfer to the hospital for chronic disease.

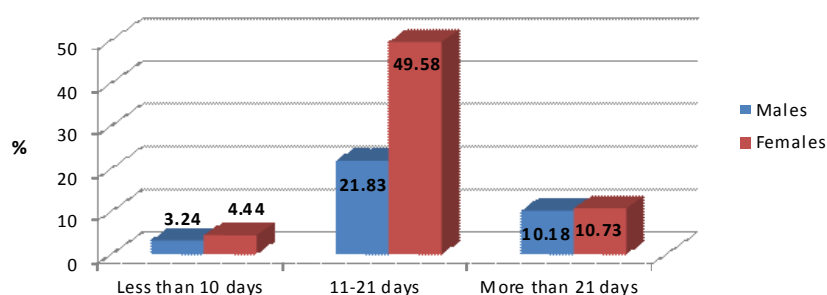


Fig. 8. Distribution of the study group N on gender, according to the duration of hospitalization

Evolution

I considered that the number of relapses requiring hospitalization was an objective criterion to assess evolution. The majority of the patients in this group – 57,63 %, benefitted, on average, from 3 – 5 admissions in the studied period of time (Fig. 9). If we add the patients with less than three admissions, we may say that more than 3/4 of the patients had a positive evolution.

The segment of patients with more than five hospitalizations widely overlaps the segment of patients with longer duration of hospitalization. At the same time, the anamnestic data reveal the existence and persistence of psychotic features, psycho-traumatic factors, long-term treatment with conventional antidepressants, therapeutic resistance.

On gender distribution, we notice that in the case of males evolution is more favourable than in the case of females. The difference is marked by the high percentage of patients with few admissions and the small number of chronic cases. As concerns females, we have come across a reverse situation: the small number of female patients with less than three hospital admissions is clearly noteworthy. Female patients with more than five admissions have a significant percentage in the group as a whole.

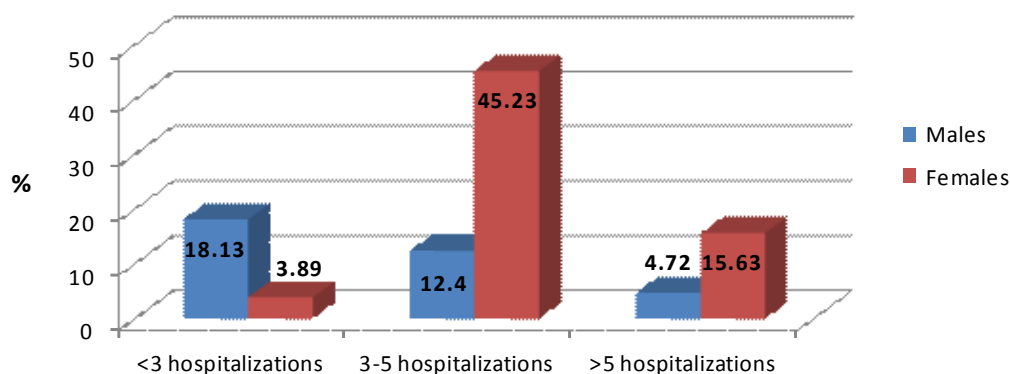


Fig. 9. Distribution of the study group N on gender, according to the number of hospitalizations

DISCUSSIONS

We notice a dramatic increase in depressive disorder among patients over 30 years old, young ages are not well represented in our group (2.96 %), unlike the literature data that estimate a depression prevalence among adolescents by 5% (Bostic, 1997).

A significant percentage is also registered in the category of over 60 years old, where, if we take into account clinic symptomatology, depression was almost invariably accompanied by signs of cognitive deficit.

On gender distribution, females have the highest preponderance at all age groups, except for those over 60 years old, emphasizing the existence of problems of adaptation to everyday life which prove to be more relevant to males included into this age category. The most poignant difference between the two sexes lies in the period of 31 – 45 years, where females are five times more numerous than males.

Chi-square	298.351
p value of Chi-square	$2.45 \cdot 10^{-63}$

By using the chi-square test I found the value of 298.351, which, in terms of 5x2 incidence tables, corresponds to a p value of $2.45 \cdot 10^{-63}$. Therefore, we can assert that there is a highly significant difference of gender distribution according the age of the patients.

The difference between the depression percentage according to the area of residence could be explained by considering that the inhabitants from urban areas, owing to a superior mental health care system than the one from rural areas, have easier access to specialized services, so that diagnosis and hospitalization are determined with more expertise and readiness. This is not always possible in rural areas, and there are several arguments to support this idea, such as: demand for

psychiatric consultation and hospitalization, only when serious cases are concerned, mostly accompanied by symptoms of addiction.

Chi-square	5.849
p value of Chi-square	0.015

By using the chi-square test I found the value of 5.849, which, in terms of 2 x 2 incidence tables, corresponds to a p value of 0.015. Therefore, we can assert that there is a highly significant difference of gender distribution according the area of residence.

In terms of mental balance, it is clearly to state that marriage provides greater advantages for men than women, idea which is endorsed by the fact that higher depression rates were found in divorced and widowed patients, rather than in married ones.

Chi-square	1672.032
p value of Chi-square	$2.25 \cdot 10^{-18}$

By using the chi-square test I found the value of 1672.032, which, in terms of 3 x 2 incidence tables, corresponds to a p value of $3.12 \cdot 10^{-352}$. Therefore, we can assert that there is a highly significant difference of gender distribution according to the marital status.

As to the distribution of patients according to their level of education, I have noted a higher percentage of patients with superior studies as compared to previous research done in the clinic. The difference is given by young patients, because their access to superior education has become easier recently. Similar to literature data (Kovacs, 1998), in these cases, I have found many addiction phenomena.

Chi-square	290.629
p value of Chi-square	$7.77 \cdot 10^{-64}$

By using the chi-square test I found the value of 290.629, which, in terms of 3x2 incidence tables, corresponds to a p value of $7.77 \cdot 10^{-64}$. Therefore, we can assert that there is a highly significant difference of gender distribution according to the level of education.

Throughout this study, I have noted that the sudden onset of depressive disorder has been increasing from year to year. It is represented by suicide attempt with or without plan and is more frequently found in men aged over 50. This particular case overlaps literature data, that estimate a percentage of up to 20 % of depressive disorder occurrence, which is often underdiagnosed in patients over 50 years old (Reynolds, 1994; Koenig, 1997).

Chi-square	147.210
p value of Chi-square	$7.05 \cdot 10^{-34}$

By using the chi-square test I found the value of 147.210, which, in terms of 2 x 2 incidence tables, corresponds to a p value of $7.05 \cdot 10^{-34}$. Therefore, we can assert that there is a highly significant difference of gender distribution according to the onset of the disease.

Major depressive disorder, with or without psychotic features, was found in more than 3/4 of the patients and is characterized by the presence of symptoms, such as lasting depressive mood and ideation, major adaptive deficit and in the case of depressive disorder with psychotic features, by the presence of suicidal and parasuicidal behaviour with delirious ideas of culpability.

Chi-square	59.494
p value of Chi-square	$7.53 \cdot 10^{-13}$

By using the chi-square test I found the value of 59.494, which, in terms of 4 x 2 incidence tables, corresponds to a p value of $7.53 \cdot 10^{-13}$. Therefore, we can assert that there is a highly significant difference of gender distribution according to depressive disorder severity.

Patients with more than three weeks admissions were usually cases that presented a longer evolution of the disease, severe symptoms, therapeutic resistance, long-term treatment with tricyclic and tetracyclic antidepressants and electroconvulsive therapy, as well as low socio-familial support. In this type of patients, the quasi-constant presence of psychotic features, though sometimes discordant, imposed the association of antipsychotic drugs, especially olanzapine.

Chi-square	81.263
p value of Chi-square	$2.25 \cdot 10^{-18}$

By using the chi-square test I found the value of 81.263, which, in terms of 3 x 2 incidence tables, corresponds to a p value of $2.25 \cdot 10^{-18}$. Therefore, we can assert that there is a highly significant difference of gender distribution according to the duration of hospitalization.

International statistics estimate a percentage of up to 60 % of patients with relapses in depressive disorder (Evans, 1997; Unutzer, 1997). From this point of view, our group was close to the upper limit, 57,63 % of patients benefitted from three or more admissions in the studied period of time.

Chi-square	891.778
p value of Chi-square	$2.25 \cdot 10^{-194}$

By using the chi-square test I found the value of 891.778, which, in terms 3 x 2 incidence tables, corresponds to a p value of $2.25 \cdot 10^{-194}$. Therefore, we can assert that there is a highly significant difference of gender distribution according to the number of admissions.

CONCLUSIONS

- Between 1999 and 2003, the growing number of hospitalizations for depressive disorders represented 40 % of the total hospitalizations in the Psychiatric Clinic.
- The age interval 46 – 60 years seems to be the most affected by depressive disorder and females are the majority of the group of study – 64.75 %.
- Urban area and loneliness seem to be reflected in the vulnerability factors that define depressive disorder; over 75 % of the patients have elementary and secondary educational levels, according to general population representation.
- The onset of the condition was insidious in over 3/4 of cases and it was triggered by socio-familial psycho-traumatic factors. Heredo-collateral antecedents for mental illness were present in more than half of the cases.
- Given the clinic profile, most of the cases – 78.17 % were included, pursuant to ICD-10 criteria, in the group of major depressive disorders. Duration of hospitalization was of less than three weeks for 79.09 % patients of the group.
- 79.65 % patients of group N benefitted, on average, from less than one hospitalization per year, while 16.15 % were psychiatric emergencies.

Acknowledgments and disclosure

The authors declare that they have no potential conflicts of interest to disclose.

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