

PROFESSIONAL PAPER

Depression in Multiple Sclerosis Patients

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Introduction: Multiple sclerosis (MS) manifests also with the symptoms of affective disorders. Depression is the most common mental disorder among patients with MS and it has negative impact on their working ability, social relations and quality of life. The aim of this study is to investigate gender, age, marital status, education level and employment related to patients with depressive symptoms in population of MS, treated at the Department of Neurology, Clinical Center University of Sarajevo. **Method:** In the study it was analyzed 50 randomly selected patients with various types of multiple sclerosis. Severity of depression was evaluated using the Beck Depression Inventory (BDI). **Results:** The study included 33 female and 17 male patients aged 21 to 60 years. In the sample of MS patients there were 56% with depressive disorder. There is no statistically significant difference between patients gender. Depression is more frequent among younger and middle age patients, while all the patients older than 51 years are in a normal mood (total 31.9%). Significantly higher percentage of non-depressive patients (72.2%) are married, while depression is present among all divorced patients (10.7%), majority of single (35.8%) and widowers (21.4%). Taking into consideration level of education, there is a statistically significant difference as follows: depression is more frequent among patients who graduated university (46.4%) and secondary school (50%) compared to ones who finished only primary school (3.6%). There is significantly higher number of unemployed and retired patients with depressive symptoms (75%) in comparison to the employed ones. **Conclusion:** Depression occurs more frequently among MS patients who are younger, unemployed, highly educated and without spouse. There is no statistically significant difference between male and female patients. **KEY WORDS:** MULTIPLE SCLEROSIS, DEPRESSION, DEMOGRAPHIC CHARACTERISTICS.

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1. INTRODUCTION

Multiple Sclerosis (MS) is a chronic, inflammatory, autoimmune disease of the central nervous system. Clinical

manifestations of the disease may be very different. It can be manifested in the form of different neurological, psychological and psychiatric symptoms

and signs, including the symptoms of affective functions disorder. Depression is the most frequent psychological disorder in the MS patients and it has unfavorable influence on working ability, social interaction and patients' quality of life. Numerous studies suggest that the quality of life of these patients depends to a great extent on the presence and degree of depression. Multiple Sclerosis as a chronic, progressive, neurological disease influences all aspects of an individual's life, not only physical, cognitive, emotional aspects respectively, but also social and working activities, functioning in the family and financial status (1).

The prevalence of clinically manifested depression in the MS is 25%-50% and it is about three times higher than the rate in the general population (2). According to Sadovnick et al, the risk of depression in MS patients ranges from 40% to 60% (3). Risk factors for a large depressive episode in the MS were identified in a survey and include female gender, age under 35, family history of depression and high exposure to stress (4). At least one third of patients experience a significant decline in the living standards after the diagnosis.

Within 10 years after the diagnosis a half of patients suffering from MS cannot fulfill everyday work and obligations. Fifteen years after the onset of the illness a half of the patients necessitates help to move, while after

25 years around a half necessitates a wheelchair (5). Age, marital status, degree, employment, and material status are factors which correlate with depressive affective disorder in patients suffering from MS.

2. AIM

The aim of this paper is to evaluate correlation of gender, age, marital status, degree, employment and depressive disorder in patients with MS treated at the Neurology Clinic, Clinical Center University of Sarajevo.

3. MATERIAL AND METHODS

The survey prospectively studied 50 randomly chosen patients with different types of MS. They were clinically monitored at the outpatient department for demyelinating diseases at the Neurology Clinic. The study was conducted during 2006. There was specially designed questionnaire for the study with the Beck Depression Inventory Scale (BDI) which was also used. Special emphasis was placed on age, gender, education degree, employment and marital status. According to the results on BDI scale patients were classified in two groups: non-depressed (BDI 0-9) and depressed (BDI>9). The data were processed using X² test.

4. RESULTS

The survey comprised 33 (66%) females and 17 males (34%), 21 to 60 years old.

In the surveyed sample the depressive disorder was found in 56% of patients (Chart 1). There is no statistically significant difference between the patients' gender (Chart 2).

Depression was more frequent in younger and middle-aged patients compared to older patients. A half of all patients showing symptoms of depression were up to 35 years of age. All patients older than 51 (31.9%) had normal mood. X² value was 13.749, and the level of significance was p<0.05 (Chart 3).

Markedly higher number of non-depressive patients (72.7%) has a spouse, while depression was present in all divorced patients (10.7%), most unmarried (35.8%) and most widow/ers (21.4%) (Chart 4).

According to the education degree

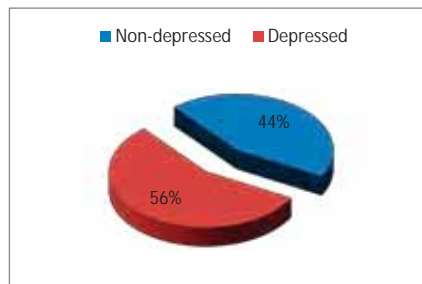


CHART 1. Depressive disorder in the sample

there is statistical significance: depression is more frequent in patients with higher degree (46.4%), as well as in patients with secondary schools (50%) compared to patients with finished elementary school (3.6%) (Chart 5).

There is significantly higher number of unemployed or retired (75%) who exhibit depression in relation to employed patients (Chart 6).

5. DISCUSSION

This survey evaluated demographic and social characteristics of depressive disorder in patients with MS. Evaluated elements included: gender, age, marital status, education degree and employment, as well as the occurrence of affective disorder which depended on these characteristics.

One of the most frequently used scales for depression assessment is BDI scale (Beck et al, 1961) which is appropriate for the use in psychiatric patients with depressive symptomatology; it can also be used in neurologic patients if there is suggested depression, as well as in normal population. The scale has 21 questions which are assessed by four degree scale in relation to the severity of the disorder. The BDI score from 0 to 9 is a non depressive state, 10 to 15 is considered mildly depressive state, 16 to 19 mild to moderate depression, 20 to 29 moderate to marked depression, while 30 to 63

is severe depression.

Significant positive role has support by the family, friends and health professionals, because they influence the increase of the sense of social usefulness and acceptance, which, as studies have shown, is strongly correlated with measures of quality of life in the MS patients (6, 7).

Unemployment, physical disability and lower socioeconomic status are coupled with an increased risk for depression in general population (8). The depression rate in patients with physical disability is higher than in patients without disability; unemployment was established in almost 30%

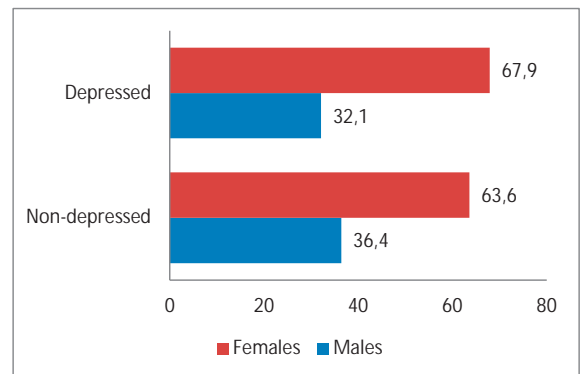


CHART 2. Depression and gender

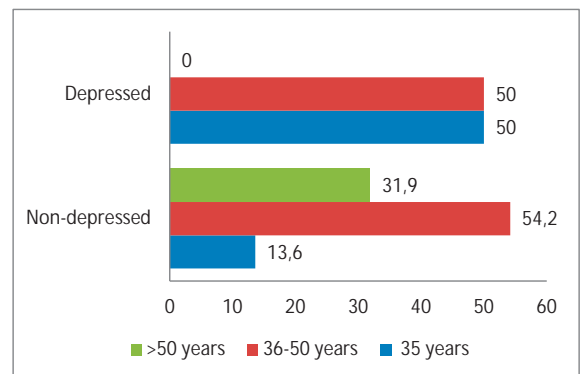


CHART 3. Depression and age, X²=13.749 p<0.05

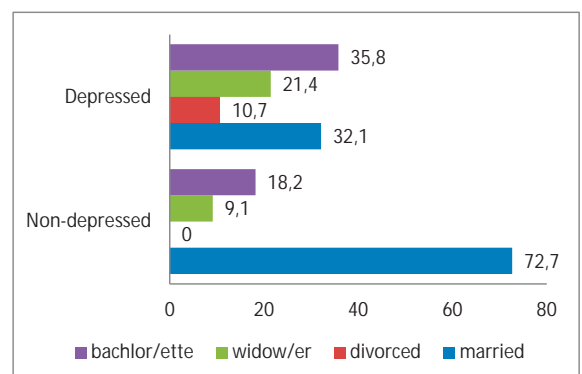


CHART 4. Depression and marital status, X²=8.940 p<0.05

of depressed patients in the group with physical disability. We proved on our sample that employment is important factor of affective state of patients, since depressive disorder was significantly more frequently present in unemployed patients.

We included retired in the group of employed. There are different interpretations about the connection between unemployment and depression in the MS studies. Having in mind that most of MS patients lose their jobs and that around one third suffers a decline in living standards, professional and financial losses could explain the occurrence of depression in those patients (9). Unemployment of the MS patients is combined with lower quality of life. Williams et al reported the unemployment as the strongest predictor of a major depressive episode in MS patients and that the chances for depression are 3.2 times higher in unemployed patients (10).

Similar results suggested Idiman et al (11) and Solari (12). Amata study showed a positive influence of employment on physical health scores in employed patients, which corresponds with our results (13).

On the other hand, Chwastiak et al have not found that unemployment was combined with depression in the sample of 739 MS patients (14). Their survey found 42% of MS patients having symptoms of depression, and they established severe depressive disorder in 29% of patients. Depression was connected with shorter duration of the disease (disease lasting less than 10 years was combined with 36% higher risk of depression), with lower education, younger age and absence of social support. It is interesting that in this study, as well as in our survey, there was no established connection of depression and gender, although depression was 1.7 to 2 times more frequent in females in general population (15). The same results published Solari et al in Italy (12), Idi-

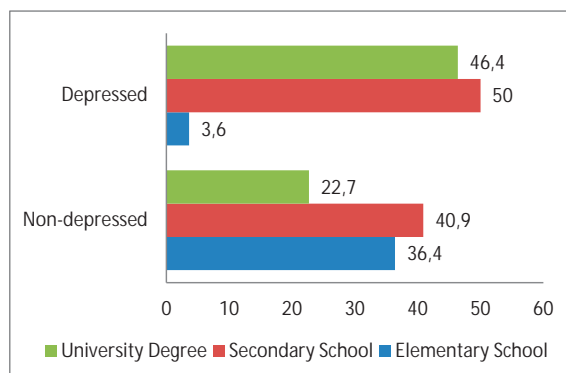


CHART 5. Depression and Education, $\chi^2=9,504$, $p<0,05$

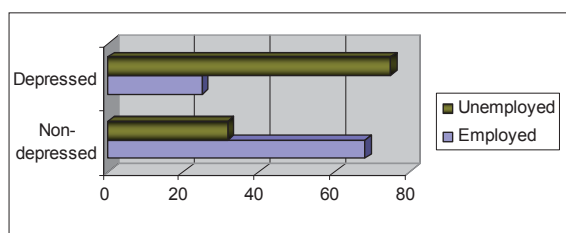


CHART 6. Depression and employment

man et al in Turkey (16), and Hooger-
vorst et al in the Netherlands (17).

The epidemiologic data on the most common onset of the disease inform age between 20 and 40 years (18, 19). Younger patients at the onset of the disease have more frequently registered affective disorder. We have registered depressive disorder significantly more frequently in patients up to 35 years of age in our material.

Patten's study in Canada showed high prevalence (25%) of depressive disorder in MS, where was also evident more frequent occurrence of depression in younger individuals, compared to older patients with similar level of physical disability (20). Patten's results are comparable to our own, although it should be mentioned that the aim of this work was not the study of cognitive dysfunction, which we have established to be more frequently present in older patients.

Marital status in our sample remained unchanged after the diagnosis of MS. Many MS patients who have a spouse report the greatest support received from them (21). Numerous studies have established that MS patients, particularly unmarried women, are at greater risk for the reduction of social support during the illness. Aside from that, non-supportive relationships are significantly and independently con-

nected to depression.

There was 66% of patients in Solari et al study who lived in union, and 34% of singles (3% widow/ers and 6% divorced), which is similar to our sample with slightly higher percentage of divorced (6% : 1%). In this study, patients living in the union also had lower quality of life with statistically significant differences (12) in divorced patients compared to patients in our sample. A Turkish study by Idiman et al, has not found statistically significant difference of marriage versus optimal MS patients' affect. Our study showed significant absence of depressive disorder in married patients (16).

We had in our sample mainly depressed patients with secondary school education, college or university degree. Education positively correlated with the degree of depressive disorder. The sample contained the highest number of patients with secondary school which is congruent with the results of Solari et al (12).

In the study conducted in Turkey, the majority of patients had elementary education (36%), then secondary education (33%), and university degree (31%) (16).

Compared to our study, in the study conducted by Solari et al participated higher percentage of employed patients. In this study a statistically significant positive impact of employment was obtained on cumulative score of physical health ($p=0,03$), but without the influence on mental health score (12).

Amato et al study also showed the positive impact of employment on physical score ($p=0,002$). This study had 47% employed patients (22).

Voss et al study, which evaluated additional factors influencing depressive mood in MS patients, also confirmed that the ability to perform useful activities in the society, including employment and education, has a role of protective factor in relation to the depression development and quality of life improvement (23), which is in accordance with our results.

6. CONCLUSION

The results of this survey show that depression occurs more frequently in younger unemployed MS patients with-

out spouse or a higher degree.

There was statistically significant difference ($p < 0.05$) between the groups in relation to age, marital status, education and employment. There was no statistically significant difference between genders in relation to presence of depressive disorder.

This survey points out to the importance of psychiatric disorders recognition in MS patients who necessitate a multidisciplinary approach.

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