



# Epidemiological Characteristics of Great Depression Diseases of Hospitalized Patients in Psychiatric Hospital “Negorci” for a Five-Year Period From 2013 to 2017

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## Abstract

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**Background:** Severe depression beside the pathological mood also denotes the cognitive, perceptual, and motor activities that are psychopathologically related to the scope of all psychic dynamics, which means cognitive, conative, and emotional. This mental illness covers a large area of the affective life of a man with a wide range of severe depression classified by ICD-10 – F32, F32.2, and F32.3. With retrospective approach to research from medical history collects data on biological and social factors that have a positive or negative effect on the onset and course of severe depression.

**Aim:** The research aims to determine the total number of patients with severe depression treated

in hospital conditions in the Psychiatric Hospital “Negorci” – Negorci for a period of 5 years from 2013 to 2017 to get a clear picture of the factors and specific predictors that lead to the development of severe depression.

**Methods:** Within the research methods, all the parameters contained are calculated so that it can be concluded that the predictors influence and differ from other stakeholders responsible for etiopathogenesis, although they have a mutual influence.

**Results:** According to the current study, patients with severe depression were found to have an increased frequency between 45 and 62 years. The mean age of the respondents was 52.14 years. According to the level of education, the majority (49%) of the patients have completed primary education and the least with higher education, i.e., only 2 (3.1%).

**Conclusion:** From the obtained data, it was obtained the scope of the influence of sociodemographic data on the occurrence of severe depression and sequelae of the disease.

## Introduction

Depressive diseases affect a wide range of mental health changes, ranging from grief and intimidation, insomnia with psychosomatic complaints, to psychotic symptoms, such as crazy ideas, hallucinations, stupor mental disorders within the severe depression, and a diagnostic entity with a chronic course [1], [2]. The World Health Organization estimates that, in most parts of the world, most of the population suffers from mental illnesses that manifest themselves with depressive phenomena at least once in their life, regardless of gender, age, demographic and sociocultural characteristics, religious affiliation, and persuasion [3].

Terminological and nosological depression is an affective disorder with primary disorder (reduction) of cognitive functions, alteration of affectivity, psychomotor retardation, and social isolation. Thinking content is depressed, accompanied by suicidal ideations or attempts to commit suicide [4].

Research performed on hospitalized patients under the diagnosis severe depression suggests that depressive disorders are among the top two leading causes of disability due to illness. The consequences of this disease and the loss of health are great. Depression ranked by the WHO as the biggest contributor to global incompetence – 7.5% of all ages in 2015.

Globally, it is estimated that over 300 million people suffer from depression equivalent to 4.4% of the world's population. The percentage of the global population with severe depression in 2015 is estimated at 4.4%. Severe depression is more common in women (5.1%) than men (3.6%). Prevalence rates differ by age – over 7.5% in women aged 55–74, and over 5.5% in men of the same age. The WHO does not have any data on the prevalence of severe depression in the Republic of North Macedonia for the period of 2005–2016 (which is also a motive for this survey) while in the neighboring countries, the data are Albania 4.8%, Bulgaria 5.2%, and Greece 5.7% [5].

Over the past few years, the results of the studies have shown that sociodemographic factors play a significant role in abnormal functional activity and are recognized as the main triggers for the pathogenesis and severity of severe depression. In Bangladesh, a study based on hospitalized patients investigating sociodemographic factors and their correlation with the severity of severe depression [6] shows that 56% (133) are men and 44% (106) are women. Of the married people, 56% had a tendency to develop depression compared to unmarried persons, where the percentage was 36%. Residents of urban areas, 64%, are more likely to suffer from depression than those in rural areas. Correlation analysis shows that age, gender, marital status, education, family income, and place of residence are related to the severity of the disease. In addition, age, marital status, and place of residence are positively correlated with the severity of severe depression, while sex, education, and family income are negatively correlated with the severity of the severe depression. It has been established that the sociodemographic factors associated with depression are low socioeconomic status, poor educational background, and death of a spouse.

In Canada, the prevalence of severe depression was found in 15.4% single mothers compared to 6.8% in married mothers [7], [8]. Many studies confirm a marked negative correlation between mental disorder and socioeconomic status in the United States and Canada (Ontario) [9], [10].

The current study shows that age, gender, education, employment status – unemployment, marital status, and place of residence are related to the severity of depression and is a challenge for research in the field of affective psychiatric disorders.

### **Objectives**

The main goal is to determine the total number of patients with severe depression treated in the Psychiatric Hospital “Negorci” – Negorci over 5 years, retrospectively in 2013 until 2017 and determining the impact of sociodemographic variables as risk factors and predictors.

### **Secondary goals**

1. Obtain a clear picture of the factors that lead to the development of severe depression.
2. The influence of gender, age, education, employment, marital status, and place of residence (rural or urban environment) as sociodemographic characteristics of the onset of severe depression.

## **Materials and Methods**

### **Population, sample, and instruments**

The study is retrospective and is performed by collecting data from the medical documentation of treated patients in the Psychiatric Hospital “Negorci” – Negorci, in the period from 2013 to 2017. Out of the total number of patients treated at the hospital (1792) over 18 years of age, a sample of 63 patients, expressed as a percentage of 3.51%, is composed of patients diagnosed with ICD 10 with diagnosis – F32, severe depression, F32.2 – severe depressive episode without psychotic symptoms, and F32.3 severe depressive episode with psychotic symptoms.

Given that, the purpose of the research is to obtain a clear picture of which the sociodemographic characteristics have the biggest influence on the occurrence of major/severe depression, a short questionnaire has been created that contains items for sex, age, education, and marital status of the patients from the sample and it is filled with taking of data from the medical documentation of the patients.

The collected data are statistically processed in the SPSS program, using descriptive statistics (frequencies, percentages, graphs, etc.). The descriptive statistics show the characteristics of severe depression in the Psychiatric Hospital “Negorci” – Negorci in the examined sample. The effects of different factors on the occurrence of severe depression have been checked by cross-regulation.

### **Inclusion criteria**

- Patients with severe depression with and without psychotic elements were included in the study.

### **Exclusion criteria**

The following criteria were excluded from the study:

- Bipolar affective disorder
- Depressive phases in schizophrenic patients
- Senile paranoid-depressive disorders.

## **Results**

The total number of admissions to the Psychiatric Hospital “Negorci” – Negorci in the period from 2013 to 2015 is decreasing, and in 2016, it notices its peak, a data that are in negative relation with the growth of patients with severe depression in the period from 2014 to 2015; meanwhile, in contrast, the number of patients

**Table 1: Distribution of respondents according to gender and education variables**

| Cross tabulation               | Education    |                   |             |            | Total |
|--------------------------------|--------------|-------------------|-------------|------------|-------|
|                                | No education | Elementary school | High school | University |       |
| <b>Gender</b>                  |              |                   |             |            |       |
| <b>Men</b>                     |              |                   |             |            |       |
| Count                          | 10           | 15                | 8           | 1          | 34    |
| Percentage of within gender    | 29.4         | 44.1              | 23.6        | 2.9        | 100   |
| Percentage of within education | 66.7         | 48.4              | 53.3        | 50         | 54    |
| Percentage of total            | 15.9         | 23.8              | 12.7        | 1.6        | 54    |
| <b>Women</b>                   |              |                   |             |            |       |
| Count                          | 5            | 16                | 7           | 1          | 29    |
| Percentage of within gender    | 17.2         | 55.2              | 24.1        | 3.5        | 100   |
| Percentage of within education | 33.3         | 51.6              | 46.7        | 50         | 46    |
| Percentage of total            | 7.9          | 25.4              | 11.1        | 1.6        | 46    |
| <b>Total</b>                   |              |                   |             |            |       |
| Count                          | 15           | 31                | 15          | 2          | 63    |
| Percentage of within gender    | 23.8         | 49.2              | 23.8        | 3.2        | 100   |
| Percentage of within education | 100          | 100               | 100         | 100        | 100   |
| Percentage of total            | 23.8         | 49.3              | 23.8        | 3.2        | 100   |

with severe depression who are treated at the hospital is growing, especially in 2015, it reaches its peak.

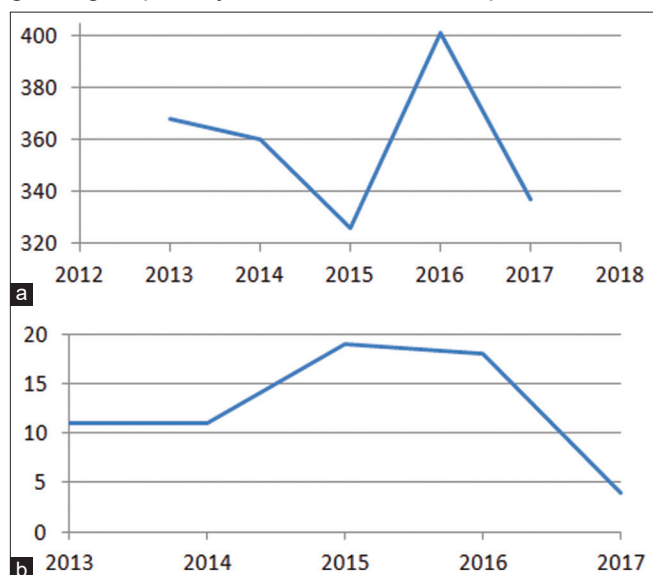


Figure 1: (a) Number of patients (treated hospitals) admitted to the hospital by years; (b) Number of patients with severe depression who are admitted to the hospital

Of the 1792 hospitalized patients, 63 are diagnosed with severe depression, expressed as a percentage of 3.51%. In 2013, of the total 368 patients admitted, 11 (2.9%) are severely depressed, in 2014, out of 360 patients, 11 (3.05%) are severely depressed, in 2015, of the 326 admitted patients, 19 (5.8%) are severely depressed, in 2016, of 401 hospitalized patients, 18 (4.48%) with severe depression, and in 2017, of a total of 337 patients, 4 (1.18%) are severely depressed (Figure 1).

The sample consists of a total of 63 patients with severe depression who were hospitalized at the Psychiatric Hospital "Negorci" in the period from 2013 to 2017. Of these, 46% are men and 54% are women, which show a greater prevalence of women with major/severe depression in this hospital compared to men.

Regarding age in patients with major/severe depression, a range of 28–71 years old is observed, but with an increased frequency between 45 and 62 years. The average age of the respondents is 52.14 years (Figure 2).

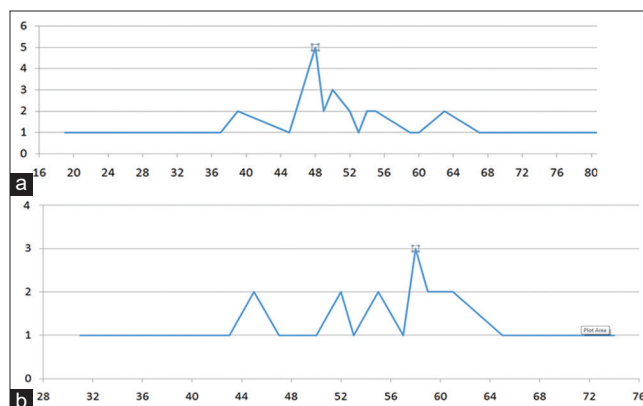


Figure 2: (a) Graphic presentation of major/severe depression in relation to the age of female patients; (b) Graphical presentation of major/severe depression in relation to the age of male patients

Most (55%) of patients have completed primary education and at least with a university degree that is only 1 (1.6%), Figure 3a.

Most (44%) of patients have completed primary education and at least with higher education that is only 1 (2.9%), Figure 3b.

The largest part (49%) of patients has completed primary education and at least with higher education that is only 2 (3.1%), Figure 3c.

There was no statistically significant difference between the genders in terms of completed education.

From the display of the cross-sectional variation of education and gender in Table 1, it can be noted that, to a large extent, 66.7% of men who are without education are severely depressed.

Regarding the activity of patients, only 12 of them, is 19.05%, are employed, and even 80.95% are unemployed.

Most of the patients 82.54% are married, 25.4% are widowed, 11.11% are single, and only 4.76% are divorced (Figure 4).

From the display of the intersection of the variable labor relation and marital status in Table 2, it can be noted that the unemployed status significantly influences a greater prevalence of severe depression, that is, in all four marital statuses (divorced 3.2%, male

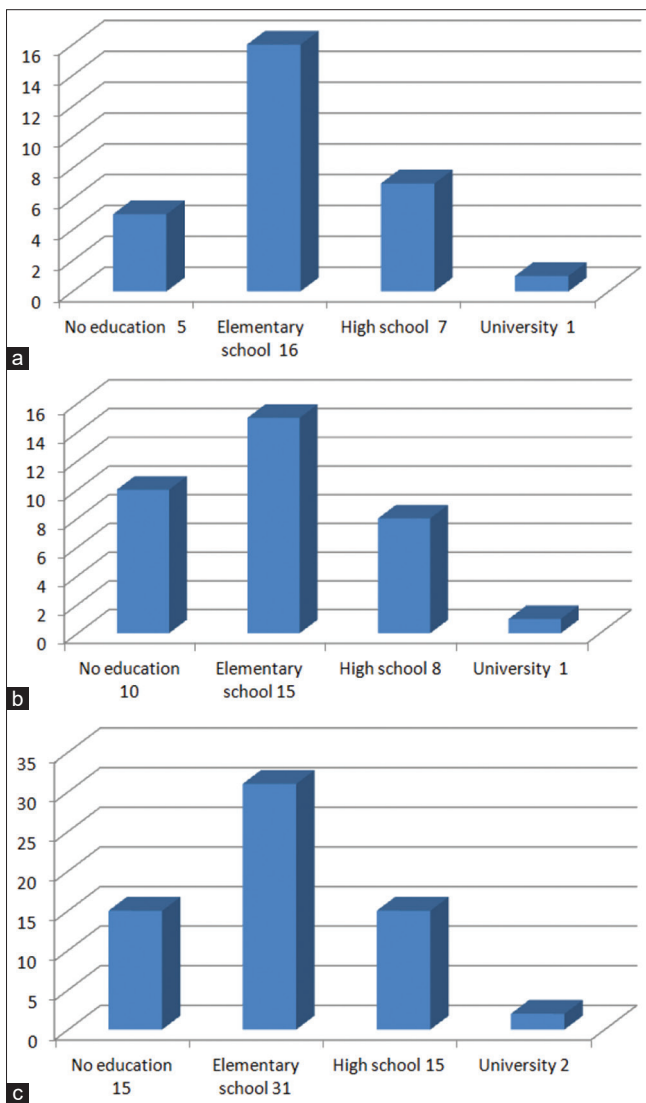


Figure 3: (a) Graphical depiction of the major depression in terms of the completed education of female patients; (b) Graphic presentation of major/severe depression in terms of completed education of male patients; (c) Graphic presentation of major/severe depression in terms of completed education of patients of both genders

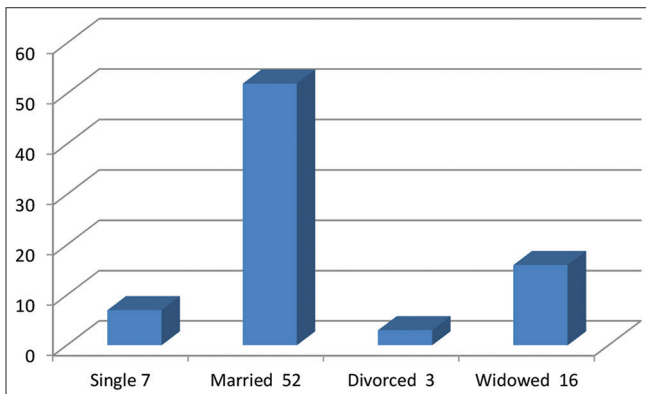


Figure 4: Graphic presentation of major/severe depression regarding the marital status of patients

7.9%, widowed 17.4%, and married 50.8%), percentage of severe depression is higher in relation to the status of an employee.

**Table 2: Crossing the variables marital status and working relationship according to the place of residence there is no big difference, 57.1% live in the urban environment and 42.9% live in a rural environment**

| Cross tabulation                    | Employed/Unemployed |            | Total |
|-------------------------------------|---------------------|------------|-------|
|                                     | Employed            | Unemployed |       |
| <b>Marital status</b>               |                     |            |       |
| <b>Single</b>                       |                     |            |       |
| Count                               | 1                   | 5          | 6     |
| Percentage of within marital status | 16.7                | 83.3       | 100   |
| Percentage of within employed       | 7.7                 | 10         | 9.5   |
| Percentage of total                 | 1.6                 | 7.9        | 9.5   |
| <b>Married</b>                      |                     |            |       |
| Count                               | 9                   | 32         | 41    |
| Percentage of within marital status | 22                  | 78         | 100   |
| Percentage of within employed       | 69.2                | 64         | 65.1  |
| Percentage of total                 | 14.3                | 50.8       | 65.1  |
| <b>Widowed</b>                      |                     |            |       |
| Count                               | 2                   | 11         | 13    |
| Percentage of within marital status | 15.4                | 84.6       | 100   |
| Percentage of within employed       | 15.4                | 22         | 20.6  |
| Percentage of total                 | 3.2                 | 17.4       | 20.6  |
| <b>Divorced</b>                     |                     |            |       |
| Count                               | 1                   | 2          | 3     |
| Percentage of within marital status | 33.3                | 66.7       | 100   |
| Percentage of within employed       | 7.7                 | 4          | 4.8   |
| Percentage of total                 | 1.6                 | 3.2        | 4.8   |
| <b>Total</b>                        |                     |            |       |
| Count                               | 13                  | 50         | 63    |
| Percentage of within marital status | 20.6                | 79.4       | 100   |
| Percentage of within employed       | 100                 | 100        | 100   |
| Percentage of total                 | 20.7                | 79.3       | 100   |

## Discussion

This study was conducted to investigate the sociodemographic status of patients with severe depression who were hospitalized in Psychiatric Hospital, “Negorci” – Negorci in the period of 2013–2017. A correlation was also found between sociodemographic status and severity of the disorder. Our findings consistent with the study are comparable to similar previous studies in some other countries Germany, China, and Canada.

This study found that 46% of men and 54% of women were similar to some previous studies that reported that women were more likely to develop severe depression [12]. According to the current study, patients with severe depression were found to have an increased frequency between 45 and 62 years. The mean age of the respondents was 52.14 years. According to the level of education, the majority (49%) of the patients have completed primary education and the least with higher education, i.e., only 2 (3.1%).

The results are comparable to the previous studies reporting an association between people with educational status and depression, significantly more severe depression occurs in those with lower education [13]. Among all respondents, 80.95% are unemployed and 19.05% are employed, which is in line with a study in China which claims that the lower the socioeconomic status, the higher the rate of severe depression [13]. Out of the total number of respondents, the percentage of severe depression according to marital status is higher in those who are married 50.8%, divorced 3.2%, alone/unmarried (7.9%), and widowed 17.4%. This result is consistent with other previous

studies where marriages (married people) have an increased risk of developing severe depression [14]. Residents of urban areas 57.1% are more likely to suffer from depression than those of rural areas 42.9%, which are similar to other findings in other studies [15].

This study concludes that age, gender, marital status, education level, employment/unemployment status, and place of residence are associated with the severity of depression. Age, marital status, and place of residence with severe depression were positively correlated with the severity of the disease, while education and employment/unemployment status were negatively correlated with the severity of depression. This strong link between depression and sociodemographic status will play an important role in understanding and treating the disease.

Of particular interest is the fact that the number of those treated at the Psychiatric Hospital – “Negorci” – Negorci with well-developed psychiatric care and treatment is high because the time spent in the hospital setting is longer because there is no developed outpatient treatment, which would reduce hospitalization. For a more precise conclusion, the research needs to be conducted on a large number of respondents from different regional parts of the Republic of Macedonia. Despite these limitations, we hope that our study will play an important role in understanding the relationship between sociodemographic status and the severity of depression.

## Conclusion

This study concludes strong link between depression and sociodemographic status will play an important role in understanding and treating the disease. This research is the beginning of the research on the representation of Severe Depression in Republic of Macedonia for which the WHO has no data for the last 10 years, and also the basis for research projects on the representation of Severe Depression in hospital conditions and further in outpatient institutions.

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