The Symptoms of Depression and the Sociodemographic Factors in Patients with Multiple Sclerosis

Symptomy występowania depresji a czynniki socjodemograficzne chorych ze stwardnieniem rozsianym

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Abstract

Introduction. Multiple sclerosis is a common, chronic disease of the central nervous system. It is a disorder that causes major changes in an organism and disorganizes to a large extent both patient's and his family's life. Mainly, it can worsen the functional ability of a patient in all aspects of daily life. One of the symptoms that occur in the course of the illness is depression (with a broad spectrum of its severity).
Aim. The aim of this work is to analyze the occurrence of depression symptoms in correlation with sociodemographic factors in patients suffering from multiple sclerosis.
Material and Methods. The research was carried out in the neurology ward and rehabilitation studio at Ludwik Błażek Multispeciality Hospital in Inowroclaw. The participants were 91 patients with multiple sclerosis. The research was done with the use of diagnostic survey method (a survey technique based on a questionnaire prepared by the researchers) and Beck's Depression Inventory.
Results. The sociodemographic factors that affect the occurrence of depression symptoms in patients with multiple sclerosis are: their age (p=0.000), level of education (p=0.009) and professional activity (p=0.001).
Conclusions. The research showed that more than half of participants have depression symptoms with a broad spectrum of its severity. **(JNNN 2016;5(1):4–9)**
Key Words: multiple sclerosis, depression, sociodemographic factors

Streszczenie

Wstęp. Stwardnienie rozsiane jest przewlekłą i bardzo często występującą chorobą ośrodkowego układu nerwowego. To schorzenie, które wprowadza istotne zmiany i w dużym stopniu zaburza życie chorego i jego rodziny. Przede wszystkim pogarsza sprawność funkcjonalną chorego we wszystkich aspektach życia codziennego. W przebiegu stwardnienia rozsianego bardzo często spotykane jest zjawisko depresji, z różnym stopniem jej nasilenia.
Cel. Celem pracy była analiza występowania symptomów depresji w korelacji z czynnikami socjodemograficznymi u osób ze stwardnieniem rozsianym.
Materiał i metody. Badania przeprowadzono w Szpitalu Wielospecjalistyczny im. Ludwika Błażka w Inowrocławiu na Oddziale Neurologii i Pracowni Rehabilitacyjnej na grupie 91 pacjentów ze zdiagnozowanym stwardnieniem rozsianym. Badania wykonano metodą sondażu diagnostycznego, techniką ankietową z wykorzystaniem autorskiego kwestionariusza ankiety oraz skali depresji Becka.
Wyniki. Do czynników socjodemograficznych różnicujących występowanie symptomów depresji należą wiek (p=0,000), wykształcenie (p=0,009) i aktywność zawodowa (p=0,001) chorych na stwardnienie rozsiane.
Wnioski. Przeprowadzone badania wskazały, że u ponad połowy badanych występują symptomy depresji o różnym stopniu nasilenia. **(PNN 2016;5(1):4–9)**
Słowa kluczowe: stwardnienie rozsiane, depresja, czynniki socjodemograficzne

Introduction

Multiple Sclerosis — SM (Latin *sclerosis multiplex*) is a common chronic disease of the central nervous system. It is a disorder that causes major changes in an organism and disorganizes to a large extend both patient's and his family's life. Mainly, it can worsen the functional ability of a patient in all aspects of daily life.

The symptoms that occur in the course of multiple sclerosis result from the damage of different parts of nervous system. The characteristic feature of this illness is that the changes advance in time and location. The most common symptoms are changes in sensation, upper motor neuron lesion, cerebellar syndrome, nystagmus, urological diseases, tiredness or vision disorder. The other possible symptoms that may occur are: various emotional states (depression, euphoria), the impairment of cognitive and sexual functions and the occurrence of pain [1–3].

It has been noticed that patients with multiple sclerosis tend to quit job earlier, they suffer from depression and have low self-assessment, social support and lower level of marital satisfaction [4]. The analysis of the course of the illness shows that 50% of the patients reach successive stages of disability [5]. It negatively influences the general well-being of an individual (the quality of life).

The results of the research show that the assessment of the quality of life in patients suffering from multiple sclerosis is often influenced by the occurrence of depression symptoms [6]. Depression may affect the natural course of the illness, its treatment and rehabilitation and at the same time it can lower the quality of patient's life. It has been shown that patients without depression have significantly higher quality of life when compared with those who suffer from mild and particularly moderate or severe depression. It has been estimated that about 50% of patients with Multiple Sclerosis suffer from depression [7]. Many research papers confirm that disturbances of mood, mostly depression, are one of the factors that lower the quality of patient's life [7,8].

The aim of this study was to analyze the occurrence of depression symptoms in correlation with sociodemographic factors in patients suffering from multiple sclerosis.

Material and Methods

The research was carried out in the neurology ward and rehabilitation studio at Ludwik Błażek Multispeciality Hospital in Inowroclaw. The participants were 91 patients with multiple sclerosis at the age of 23–58 (Table 1).

Table 1. The characteristic of the researched group

Variable	N (%)
Gender	
Female	68 (74.73)
Male	22 (25.27)
Age	
36–45	21 (23.08)
46–55	41 (45.05)
56–65	29 (31.87)
Marital status	
Single	27 (29.67)
Married	64 (70.33)
Place of residence	
City	59 (64.84)
Village	32 (35.16)
Education	
Basic	15 (16.48)
Professional	39 (42.86)
Medium	29 (31.87)
Higher	8 (8.79)
Professional activity	
Employed	13 (14.28)
Unemployed	78 (85.71)

The research was done with the use of diagnostic survey method (a survey technique based on a questionnaire prepared by the researchers) and Beck Depression Inventory. The questionnaire allowed for verifying the sociodemographic background of the examined group. Beck Depression Inventory [9,10], was used for the self-assessment of the occurrence of depression symptoms. Giving the answer to 21 questions, the participants could score 63 points. The following criteria were applied; 0–11 points — lack of depression, 12–26 points — mild depression, 27–49 points — moderate or severe depression, 50–63 points — very severe depression.

This study has been approved by the Bioethics Committee of Nicolaus Copernicus University Collegium Medicum in Bydgoszcz, Poland and the hospital authorities.

The statistical analysis was done with the use of the program IBM SPSS 23.0. Kołmogorowa-Smirnow and Shapiro Wilk's tests allowed us to compare the distribution of quantitive variables with a standard normal distribution. The results of the normality tests were the basis for the choice of nonparametric methods. The significance of the difference between two groups in the range of quantity variables was checked with the use of Manna-Whitney's test. The difference between three or more groups was measured with the use of Kruskal-Wal-

lis' test. The accepted significance level applied for the tests was p<0.05.

Results

The research showed that more than half of the participants (47–52%) showed the symptoms of depression with different spectrum of its severity (Table 2): 32 participants had mild depression, 14 participants showed the symptoms of moderate depression and only one person suffered from severe depression.

Table 2. The results obtained in Beck's Depression Inventory

Beck's Depression Inventory	N (%)
No depression	44 (48)
Depression symptoms*	47 (52)
Mild depression (12–26 points)	32 (68)
Moderate — severe depression (27–49 points)	14 (29)
Very severe depression (50–63 points)	1 (3)

*N=47 (100%)

There were no statistically significant differences in the range of the variables between males and females (Table 3). Males and females scored similar results in Beck's Depression Inventory.

The scores of the test (the symptoms of moderate and severe depression) increased with age (p=0.000) which means that the scores of all participants differ with reference to the age group they belong to with the upward trend in particular ranges (Figure 1).

There was no statistically significant difference observed between married and single patients.

The variables were not affected by the place of residence. Participants who live in the country and in the city obtained similar results in Beck's Depression Inventory.

The comparison of participants with different levels of education showed statistically significant differences in the range of Beck's Depression Inventory (p=0.009). It means that the highest scores were obtained by people with vocational qualifications (the symptoms of moderate or severe depression), the lower scores were obtained by participants with higher education level (Figure 2).

The variable of Beck's Depression Inventory was statistically higher among the unemployed (p=0.000),

Table 3. The variables and statistical values of Beck's Depression Inventory

Variable	$\bar{x}$	SD	Me	Value test	p
Gender†					
Female	36.29	12.472	31.00	-0.672	0.501
Male	33.23	9.340	29.00		
Age‡					
36–45	27.86	6.945	25.00		
46–55	35.02	10.410	31.00	21.993	0.000
56–65	42.21	12.929	46.00		
Marital status†					
Single	33.33	11.479	29.00	-1.205	0.228
Married	36.64	11.876	31.50		
Place of residence†					
City	35.02	12.012	29.00	-0.908	0.364
Village	36.84	11.473	33.00		
Education‡					
Basic	37.20	12.061	31.00		
Professional	38.15	10.579	39.00	11.470	0.009
Medium	34.10	13.505	27.00		
Higher	26.25	3.059	25.00		
Professional activity†					
Employed	26.92	5.392	25.00	-3.346	0.001
Unemployed	37.12	11.959	31.50		

Note: $\bar{x}$ — average; SD — standard deviation; Me — median
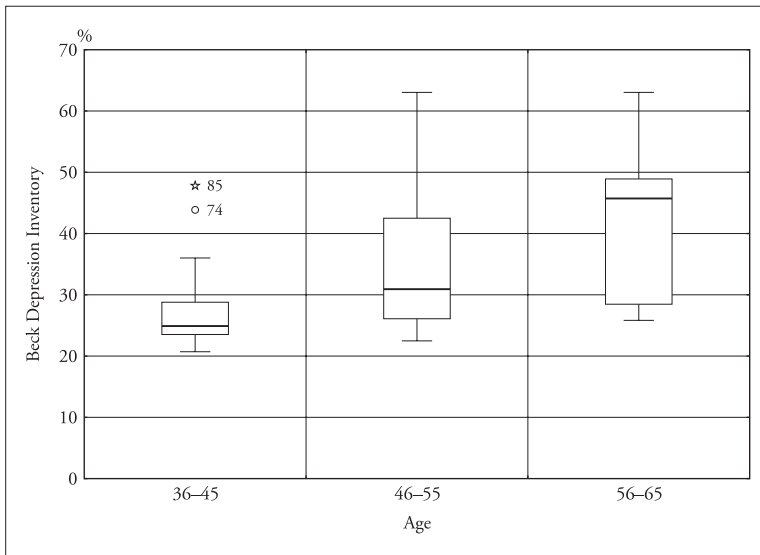†U Manna-Whitneya; ‡Kruskala-Wallisa

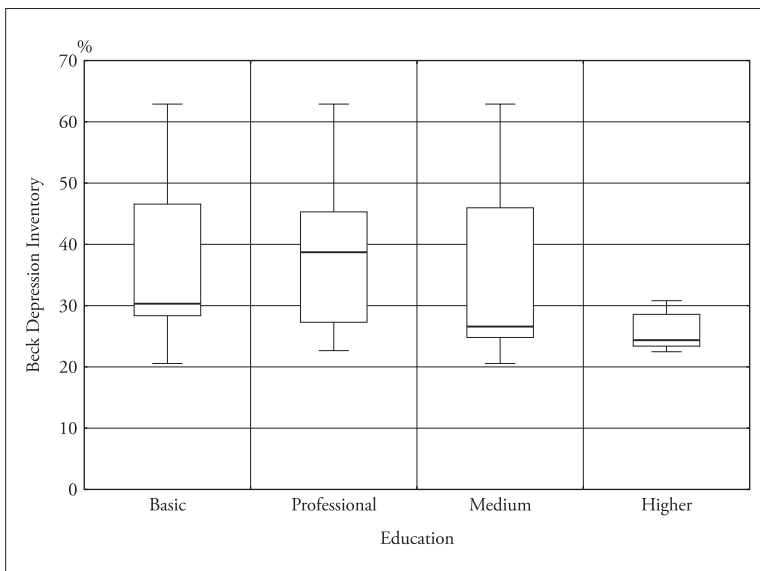Figure 1. The age and the results of Beck's Depression Inventory

Figure 2. The education level and the results of Beck's Depression Inventory
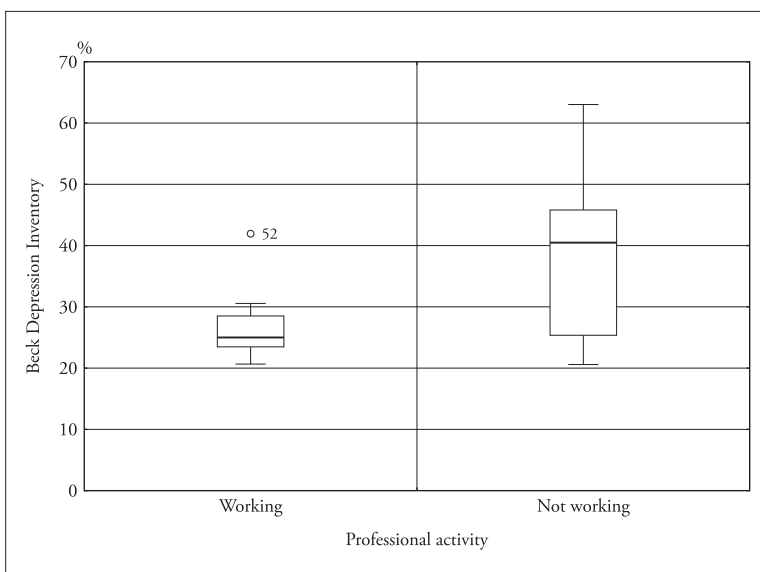

Figure 3. The professional activity and the results of Beck's Depression Inventory

which means that unemployed people obtained higher scores (moderate or severe depression symptoms) than those unemployed (Figure 3).

Discussion

Depression is one of the symptoms that frequently occur in the course of Multiple Sclerosis. It may occur with a broad spectrum of its severity [11–15].

While studying the occurrence and severity of depression in patients with multiple sclerosis Skorupska-Król et all [16] concluded that it concerns almost half of the number of participants (40–50% of patients). Its occurrence may be the result of motional consequences of multiple sclerosis, side effects of pharmacological or immunomodulatory treatment, the course of the illness or the location of inflammatory conditions. The authors assume that co-occurrence of depression and multiple sclerosis in consequence leads to some difficulties in the context of patient's cooperation in the process of rehabilitation. At the same time it lowers their general physical ability and subjective quality of life.

The results of our own research proved that most of the participants (52%) have depression symptoms (assessed with the use of Beck's Depression Inventory). The severity of symptoms was various. The results showed that 68% of participants had mild depression, the emotional state of 29% participants was classified as moderate depression, whereas 3% of participants suffer from severe depression. The detailed analysis of the results received after the use of Beck's Depression Inventory showed that bad psychic condition leads to lowered confidence. It also entails sleeping problems and lack of interest in sex. After the analysis of our own research it turned out that the problem of lowered confidence concerned more than one quarter of participants (26%). Most of participants complain about sleeping problems (86%). As regards sex, in the opinion of more than 1/3 participants their interest in sex has changed — they are not so interested in it as before and almost 1/5 of patients with multiple sclerosis have lost all their interest in sex.

The research carried out by Karakiewicz et all [3] on a group of 64 patients with multiple sclerosis show that the assessment of patient's quality of life is not affected by gender and their place of residence. However, it was shown that the advanced age of a patient is the significant factor that lowers most of the assessed categories of life quality.

Some authors claim that the quality of patient's life is mostly influenced by the length (duration) of the illness, motional disability and emotional states (depression, fear) [17].

The research carried out by Stachowska et all [6] on the group of 75 patients suffering from multiple sclerosis showed that most of the participants examined with the use of Beck's Depression Inventory did not show any depression symptoms (52%) or showed mild depression symptoms (40%). There were no participants with severe depression. It was also concluded that the unemployed had higher scores in the range of Beck's Depression Inventory. The authors also claim that the assessment of patient's quality of life is affected by such factors as: age, gender, professional activity, the stage of the disease, depressive and sexual disorders.

The research on the level of illness acceptance and the occurrence of depression was carried out by Skorupska-Król et al. [16,18]. The group of participants 2consisted of 38 patients of the Clinic of Neurology in Cracow. The research showed that the severity of depression in the surveyed group varied. The results of the Beck's Depression Inventory showed that 23.7% of patients suffered from mild depression. The emotional state of another 23.7% patients was classified as moderate depression. The self-assessment of two numerically identical groups (7.9%) suggests the severe and very severe depression. The age and the gender of the participants were not closely related with the emotional state presented. However, the detailed analysis of depression occurrence in particular age groups shows that young people (aged 20–29) do not feel its symptoms. The authors also showed that among participants there is no statistically significant correlation between the acceptance of the illness and its severity.

Conclusions

The research showed that more than half of participants have depression symptoms with a broad spectrum of its severity. The sociodemographic factors that affect the occurrence of depression symptoms in patients with multiple sclerosis are: the age, education and professional activity.

Implications for Nursing Practice

Due to the mood disturbances that occur in clinical picture of multiple sclerosis, a nurse should use different diagnostic methods (observation, interview, tests and scales) to identify patient's emotional problems and give the patient professional help to eliminate them.

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