Psychogenic Depression Depending on Gender and Age Differentiation

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Abstract

The aim of the study is to analyze the factors that can be predictors of the development and progression of psychogenic depressions, as well as establish age and gender characteristics of their clinical options. The study included 140 people (70 females and 70 males) aged 30-70. Patients were divided into 2 groups: group 1 - 70 people diagnosed with psychogenic depression, aged 30 to 50, Group 2 - 70 people diagnosed with psychogenic depression, aged 50-70. In males of the younger age group, anxious (in 10 (28.7%) men) and dysphoric (in 13 (37.1%) men) variants of psychogenic depression were typical. In females, adynamic (in 14 (40%) females) and dysthymic (in 12 (34.2%) females) predominated. In patients of a older age, the gender differentiation of clinical variants of depression disappears, however, in this age group, both among males and females, the proportion of people with the hypochondriacal variant of psychogenic depression significantly increased by 2.6 times (OR = 3.32, 95% CI [1.36- 8, 14]). Thus, we established the presence of significant gender and age differences in the clinical course of psychogenic depressions and the frequency of factors that create the basis for the occurrence of depressive disorders, which should be taken into account when conducting appropriate complex therapy of the disease.

Keywords: *Gender characteristics of psychogenic depression, Clinical variants of psychogenic depression, Age-related features of psychogenic depression, Trigger factors of psychogenic depression.*

Introduction

Since the beginning of the 21st century, the problem of depressive disorders has acquired particular urgency and therefore has become a global priority for the health system. The fast pace of life, various stress loads, a huge information flow, the socio-economic crisis play one of the key roles in shaping human health and are often premorbid factors in a wide range of psychopathological symptoms. The development of depression as a reaction of the human body to a trigger stress factor is a consequence of the interaction of psychological, biological and social factors [1, 2].

According to WHO, the share of depression in the total number of non-fatal diseases worldwide amounted to 10% in 2016 [3]. The prevalence of depression is growing every year, for example, in the United States from 1990 to 2010, the prevalence of depressive disorders increased by 43% [4].

Females suffer from depression 1.7-2.0 times more often than males [3, 5]. According to recent data, the global prevalence of depressive disorders among females is 5.8%, among males- 3.5% [6], and the risk of developing depression at least once in life is 20-25% for females and 7-12% for males [6, 3]. Depression is a disease that affects people of any age, but it is more common in adulthood. Its prevalence among older people is about 12% [7, 9].Convincing is the fact that depression is one of the five most common disorders that are found in the practice of a family doctor [2, 3].

These data indicate that depressive disorders are found in the routine of a doctor as often as, say, hypertension, diabetes mellitus, or even infectious diseases of the upper respiratory tract [3].Psychogenic depressions are not put as a separate item in the ICD-10 classification, however, this fact does not

reduce the special interest of researchers in this disease. The relevance of the study of the occurrence characteristics and psychogenic depressions course, as well as other depressive disorders, is that they negatively affect the social and physical functioning of a person, leading to a significant decrease in the quality of life, worsening the course of existing somatic diseases, complicating relationships in the family and team [10, 12].Another important problem associated with depression is suicidal behavior [13, 15].

According to research, suicidal intentions occur in 70-80% of people with depression, of which 10-15% of people commit suicide. At the same time, older people trying to commit suicide die more often than young people. At the same time, among those who survived, the prognosis is much worse [8].Today, gender and age-related features of the course of psychogenic depressions have been established, however, the reasons for these differences have not yet been accurately found.

The researchers proposed various personality and social factors to explain the greater females' vulnerability to psychogenic depressions [16, 15, 17].The relationships between these factors, possibly leading to the development of depressive disorders in females and males of different ages, have not been studied. Scientists have been studying most of these factors separately from each other, while ignoring others [7, 16, 1, 15, 4, 17, 5]. Despite the high prevalence of depression, the quality of diagnosis of this disease is still unsatisfactory, since about 50% of cases of the disease remain unidentified by medical professionals and patients themselves.

This is obviously due to the fact that doctors and patients focus on somatic pathology [10, 11, 12]. It is impressive that among the diagnosed cases a high percentage of people remains untreated [11, 12]. Given the high prevalence of psychogenic depressions, their underdiagnosis and untimely treatment, the protracted course, the lack of priority for relapse prevention and the negative social consequences of this disease, it is necessary to deepen the knowledge about the developmental characteristics of depressive disorders in people of different age categories, sex, and social status in order to improve algorithms diagnosis and increase

the effectiveness of treatment of depressive conditions. The study aims to analyze the factors that can be predictors of the development and progression of psychogenic depressions, as well as to establish age and gender characteristics of their clinical options.

Material and Methods

In order to study the frequency and characteristics of the clinical manifestations of psychogenic depressions depending on the gender and age of the patients, we examined the same number of males and females suffering from this disease. In total, the study included 140 people (70 females and 70 males) aged 30-70. The examined patients were divided into 2 groups: group 1-70 people diagnosed with psychogenic depression, aged 30 to 50 (35 females, with average age (40.69±2.47), and 35 males with average age (41.39±2.54)); Group 2-70 people diagnosed with psychogenic depression, aged 50-70 (35 females, with average age (60.15±2.73), and 35 males, with average age (59.78±3.16)).

At the time of the study, the duration of the disease was 1-5 months. Criteria for inclusion in the study: age 30-70; diagnosis of psychogenic depression; signed voluntary consent of the patient to participate in the study. Criteria for exclusion from the study: depression of a neurotic or psychotic level; endogenous depression; neurosis-like disorders; personality disorders in the stage of sub- and decompensation; postpartum depression; manifest psychoses; addiction to psychoactive substances; the presence of severe somatic pathology in the stage of sub- or decompensation; lack of compliance.

In order to assess the condition of patients included in the study, we used the clinical-anamnestic and clinical-psychopathological research method, which includes: a detailed study of complaints, assessment of the somatic, neurological and mental status of patients, identification of individual psychopathological diseases.

The Hamilton scale was used to evaluate psychogenic depression, the Spielberg-Hanin scale, and the Hospital Depression and Anxiety Scale (HADS) (Zigmond AS, Snaith RP, 1983) to determine the level of personal and reactive anxiety. Statistical processing of the results was carried out using the

methodology for calculating the odds ratio (OR) and the Fisher exact test (Fisher test 2x2).

In order to numerically evaluate quantitative characteristics, the odds advantages were calculated (the ratio of the chances of one group of objects (O1) to the chances of another group of objects (O2)): OR = O1/O2. The results were interpreted as follows: OR = 1 - the odds for both groups are equal; OR> 1 - the chance for the first group is greater than the chance for the second; OR <1 - the chance for the first group is less than the chance for the second. To obtain the true value, the confidence interval (CI) was determined in which the OR value of the general population is found with a given reliable probability p = 95%.

The odds ratio was calculated using the Past program. For a numerical assessment of qualitative signs/symptoms among females and males, the exact Fisher test (Fisher test 2x2) was used, at p <0.05, it was concluded that there was a significant difference regarding the frequency of presence of a particular sign/syndrome depending on gender/age. To calculate the exact Fisher criterion, we used the online calculator (https://medstatistic.ru/calculators).

Results

When identifying the main possible trigger factors for the development of psychogenic depression, the examined patients associated the occurrence of the disease with two or more reasons. At the same time, the main causes of depression for younger males (group 1) were problems at work (16 (45.7%) males), firing/unemployment (14 (40%) males), and financial distress (15 (42.8%) males). For females of the same age (group 1) they were: divorce (16 (45.7%) females) and family conflicts (18 (51.4%) females) (Table 1).

Older males (group 2) associated the occurrence of depression with the presence of somatic pathology (20 (57.1%) males), damage to the central nervous system (CNS) (18 (51.4%) males), and an unfavorable financial situation (19 (54.3%) males). For females of older age they were connected with somatic pathology (18 (51.4%) females), CNS disease (15 (42.8%) females), unfavorable financial situation (16 (45.7%) females), loneliness (14 (40%) females).

Table 1: The main trigger factors for the development of psychogenic depression in the examined patients, depending on gender and age

Influence factor	Number	Study group						OR	95% CI
		1 group (n=70)			2 group (n=70)				
		Males (n=35)	Females	p_1	Males	Females	p_2		
CNS damage	Abs.	9	6	>0.05	18	8	>0.05	3.27***	1.56-6.85
	%	25.7	17.2		51.4	42.8			
Somatic disease	Abs.	8	5	>0.05	20	18	>0.05	3.43***	1.6-7.0
	%	22.9	14.3		51.7	51.4			
Loneliness	Abs.	2	4	>0.05	7	14	0.035**	4.57***	1.71
	%	5.7	11.4		20	40			
Loss of a loved one/widowhood	Abs.	3	4	>0.05	8	10	>0.05	3.11***	1.21-8.03
	%	8.6	11.4		22.9	28.6			
Divorce	Abs.	7	16	0.015*	4	5	>0.05	3.32***	1.40-7.83
	%	20	45.7		11.4	14.3			
Family Conflicts	Abs.	7	18	0.047*	5	6	>0.05	2.98***	1.33-6.69
	%	20	51.4		14.3	17.2			
Firing/ unemployment	Abs.	14	7	0.046*	9	3	0.04**	2.68***	1.03-7.03
	%	40	20		25.7	8.6			
Problems at work	Abs.	16	8	0.02*	10	4	0.049**	2.22***	1.04-4.77
	%	45.7	22.9		28.6	11.4			
Financial trouble	Abs.	15	8	0.04*	19	16	>0.05	2.04***	1.03-4.05
	%	42.8	22.9		54.3	45.7			

*Note: p_1 − p value in calculating the exact Fisher criterion for males and females of group 1; p_2 − p value in calculating the exact Fisher criterion for males and females of group 2; OR - odds ratio for patients of groups 1 and 2; CI - confidence interval for OR for patients of groups 1 and 2; * - the difference is significant between males and females in 1 group; ** - the difference is significant between males and females in group 2; *** - the difference is significant between patients of groups 1 and 2; Group 1 - patients aged 30-50; Group 2 - patients aged 50-70.*

When conducting a clinical and psychopathological examination of patients, the main complaints in females were a feeling of constant fatigue, lack of joy, sleep disturbance, increased appetite, insolvency, self-incrimination and increased criticism of one's own personality.

In addition, females complained of pronounced variability in blood pressure, increased sweating, dizziness (especially with a sharp change in body position), frequent headaches, inability to breathe into the full chest, and disorders of the gastrointestinal tract. Males complained of unmotivated weakness and fatigue, increased anxiety and irritability to manifestations of aggression, headaches, sleep disturbances, frequent bad

dreams, heart pain and palpitations, asphyxiation. Clinical and psychopathological examination of patients revealed that anxiety (in 10 (28.7%) males) and dysphoric (13 (37.1%) males) variants of psychogenic depression were typical for males of group 1.

For females of the same group, adynamic (in 14 (40%) females) and dysthymic (in 12 (34.2%) females) variants of psychogenic depression predominated (Table 2). In patients of the older age (2 groups), the gender differentiation of depression options disappears, but in this age group the proportion of people (both among females and males) with a hypochondriacal variant of psychogenic depression increases.

Table 2: Distribution of the main variants of psychogenic depression in the examined patients, depending on gender and age

Depression variant	Gender	Study group								OR$_3$	95% CI$_3$
		Group 1 (n=70)				Group 2 (n=70)					
		Males (n=35)	Females (n=35)	OR$_1$	95% CI$_1$	Males (n=35)	Females (n=35)	OR$_2$	95% CI$_2$		
Anxious	Abs.	10	3	4.20*	1.06-17.17	7	3	2.67	0.63-11.31	1.37	0.56-3.37
	%	28.6	8.6			20	8.6				
Dysphoric	Abs.	13	3	6.30*	1.61-24.75	7	4	1.94	0.51-7.33	1.59	0.68-3.73
	%	37.1	8.6			20	11.4				
Adynamic	Abs.	4	14	5.17*	1.49-17.88	6	10	1.93	0.62-6.07	1.17	0.54-2.53
	%	11.4	40			17,1	28.6				
Dysthymic	Abs.	3	12	4.04*	1.15-14.16	4	8	2.29	0.62-8.48	1.32	0.57-3.08
	%	8.6	34.2			11,4	22.8				
Hypochondriac	Abs.	5	3	1.78	0.39-8.09	11	10	1.15	0.41-3.19	3.32**	1.36-8.14
	%	14.3	8.6			31,5	28.6				

*Note: OR$_1$ −odds ratio for males and females of group 1; CI$_1$ - confidence interval for males and females of group 1; OR$_2$ - odds ratio for males and females of group 2; CI$_2$ − confidence interval for males and females of group 2; OR$_3$ − odds ratio for males and females of groups 2 and 3; CI$_3$ − confidence interval for OR for patients of groups 1 and 2; * − the significant difference between males and females in group 1; ** - the significant difference between patients of groups 1 and 2; Group 1 - patients aged 30-50; Group 2 - patients aged 50-70.*

Discussion

In our study, the main task was to study the frequency of the main trigger factors for the occurrence of psychogenic depressions and the leading clinical variants of the course of this disease, depending on the gender and age of the examined patients. Therefore, in each of the groups there was the same number of patients, in particular the same number of female and male patients. This created certain difficulties, since it was more difficult to recruit the corresponding number of males for the study, since depression is much more common (in 1.7-2,0 times) for females.

This fact can be explained by the fact that in males more often the left hemisphere is more

active ("the rational part of the brain"). In females the right hemisphere is more active ("the emotional part of the brain"). As well there are differences in the neuroanatomical organization of emotions for genders. For example, males tend to have more predominant gray matter in the hippocampus, parahippocampal cortex, amygdala.

Females tend to have it in the lateral and ventrolateral orbitofrontal cortex, which plays a role in assessing emotional stimuli, and in the superior temporal sulcus, and determines the perception of social situations [18]. Another reasons are: the special place of females in society, the family, and the negative influence of religious and socio-economic factors.

Until now, most females used to have a lower professional, financial and social status than males. They were typically "oppressed" of their own opinions and desires, which often led to loss of control over the emotional sphere, creating favorable conditions for the occurrence of psychogenic depression [19, 17].

In addition, peculiarities of the neuroendocrine system are of great importance in the occurrence of depression in females, since cyclic hormonal fluctuations make females more vulnerable to various stress factors. This is confirmed by the high prevalence of premenstrual dysphoric disorders, postpartum depression, postmenopausal depression and anxiety associated with changes in ovarian hormones [20, 21, 22, 23, 24, 4, 25, 26].

Analyzing the role of various adverse stressful factors in the occurrence of psychogenic depressive disorders in patients examined, in both males and females, several factors were named as the cause of the occurrence of psychogenic depression. Among the causes of depression, most females in the younger age group mentioned family conflicts, divorce, somewhat less - problems at work, financial distress.

The presence of a significantly higher (p <0.05) frequency of the presence of these triggers in females is evidence of the leading importance in the occurrence of psychogenic depressions in family relationships in females. This is explained, again, by the special role of females in the family and society, the biological need for them to take care of someone, the tendency to sacrifice themselves in the name of the well-being of loved ones, which leads to fewer alternatives for them. At the same time, males of a younger age category (group 1) considered firing or unemployment, problems and conflicts at work, financial distress as the reasons for the occurrence of depression.

They showed great sensitivity to targeted factors and an external career, which is absolutely logical, since in society states the idea that a man is the main earner and breadwinner of a family. A failure at work and the inability to adequately financially provide for his family is deeply rooted in worthlessness and uselessness, because professional employment is a protective factor against the development of depressive disorders [27].

It is worth noting that males tried to compensate for this by increasing the load at work, some sought solace in alcohol. Confirmation of the role of the above factors in the occurrence of depressive disorders in males is the presence of a significantly higher (p <0.05) incidence of adverse professionally-oriented factors as triggers of the disease in comparison with females.

These data coincide with the results of other studies in which factors of the occurrence of depression in males and females were studied [16, 21, 18, 15, 17].In particular, a study involving dizygotic twins (n=9136) showed that males showed greater sensitivity to adverse professional factors, and females to troubles in interpersonal relationships [27]. Among males of older age group (group 2), both males and females considered the main causes of depression to be somatic and CNS diseases.

This indicates that the presence of a large number of complaints about somatic pathology is one of the defining signs of depressive disorders in older age. Patients of an older age group had two, three or more somatic diseases diagnosed. People of a younger age group had only one or two. Comparing patients of groups 1 and 2 by the presence of somatic pathology and organic CNS damage in the structure of factors causing depression, a greater influence of somatic pathology (OR = 3.43, 95% CI [1.60-7.00]) and organic damage CNS (OR = 3.27, 95% CI [1.56-6.85]) for the chance of depressive disorder in the elderly is worth mentioning.

In addition, CNS damage in a younger age had traumatic origin, and in older age had vascular origin. Like males of the younger age, older males also noted problems at work, firing, unemployment among the causes of depression (Table 1). However, it is rather difficult to objectively judge, since most of the older people were retired, and the higher professional orientation of people was completely obvious in the younger age group in this case.

So, there is a significant difference in calculating the OR between group 1 and group 2 among people who noted work troubles as the cause of depression (OR = 2.22, 95% CI [1.04-4.77]) and unemployment/firing (OR = 2.68, 95% CI [1.03-7.03]).

This indicates a greater influence of these factors on the occurrence of depression in people of the younger age group. Moreover, in the older age group, both among males and females, the percentage of people increases who consider financial insolvency as one of the major causes of depression (OR = 2.04, 95% CI [1, 03-4.05]). This is due to the retirement by age for a significant part of people of the older age group (both for females and males), which led to a deterioration in their financial situation, as well as high costs for healthcare and treating concomitant somatic pathology.

For females of the older age group, in comparison with males (p <0.05), loneliness was a significant factor in provoking depression (Table 1). It was associated with a decrease in the time spent with children and their distance from children. In this case, divorce had less influence (for the younger age group OR = 3.32, 95% CI [1.40-7.83], indicating a greater influence of divorce on the occurrence of depressive disorders in the younger age category in comparison with older).

The proportion of divorces in the older age group was less, but the share of widowhood increased (for the older age group, OR = 3.11, 95% CI [1.21-8.03], indicating a greater influence of widowhood on the occurrence of depressive disorders in the older age category compared to the younger). We found gender and age differences in the course and clinical manifestations of psychogenic depression in the studied groups. In particular, for females of the younger age group, the protracted and atypical course of depression was more characteristic.

Hypersomnia, somatization of complaints, psychomotor inhibition, decreased libido (up to its complete disappearance), and increased appetite were observed more often. For males of the younger age category, excitement, insomnia were more characteristic, suicidal thoughts were more often present, and episodes of alcohol abuse were often observed.

The clinical course features described by us coincide with other studies in this direction, in particular, a representative study conducted in Taiwan (n = 146: 89 females and 57 males, average age (38.30±11.69)), with aforementioned gender features of the clinical course of depressive disorders noted.

For people of an older age, a more suppressed picture of the clinical course of psychogenic depressions is characteristic. Apathy, depression and asthenia are present, patients of this age category typically denied their depressive disorder, as well as a high frequency of somatic complaints and a tendency to hypochondria. It should be noted that we did not observe gender differences in the clinical course of depression in this age group, which is probably due to the lesser influence of the neuroendocrine component as one of the premorbid factors for the occurrence of depression in females, since most of the them in this age category were postmenopausal.

Here, the opinions of scientists differ: there is a lot of data in the literature that after age of 50 the gender difference is leveled off in the incidence and clinical features of the course of depressive disorders, which is also associated with a change in the hormonal background [20, 21, 22].However, there are many studies that exacerbate these differences, but most of them were conducted with females in the menopause [24, 25].

When analyzing the main clinical variants of psychogenic depressions, we found that males of the younger age group were significantly more likely (p <0.05) had alarming and dysphoric variants, compared with females of the same group (Table 2). Males with an anxious version of psychogenic depression are characterized by a constant feeling of anxiety, a sharp depression of mood, they were often haunted by bad forebodings, fears for their fate, experiences of threats and pessimistic thoughts, vegetative paroxysmal attacks.

In the dysphoric variant of depression in males of a younger age group, emotional disorders dominated (sadness, depression, which changed to irritability and spitefulness, combined with anxiety and tension). In females of the younger age group, significantly more often they (p <0.05) suffered adynamic and dysthymic variants of psychogenic depression, compared to males.

For females of the younger age group, a protracted course of depression, depression, depression, tearfulness, the idea of self-accusation, physical weakness, and fatigue were characteristic, while most patients considered their condition to be absolutely natural and normal.

When analyzing main clinical variants of psychogenic depression in patients of an older age group, we did not reveal statistically significant gender differences regarding the frequency of manifestation of a particular variant of depression. However, it is worth noting that for people of the older age group, the proportion of the hypochondria variant of depression significantly increases in comparison with young people (OR = 3.32, 95% CI [1.36-8.14].

The clinic of the hypochondriacal variant of depression was dominated by an obsessive fear for health without objective reasons (somatic pathology, of course, was present, but with no exacerbation), decreased mood, emphasis on unpleasant sensations, and vegetative reactions were the basis for the appearance of hypochondria.

Our results regarding the frequency of manifestations of the main clinical variants of psychogenic depression depending on the gender and age of the examined are consistent with the results of studies devoted to the study of this problem [10, 16, 24, 15].

Conclusions

Thus, the study established the presence of significant gender and age differences in the clinical course of psychogenic depressions and the frequency of factors that create the basis for the occurrence of depressive disorders.

The main causes of depression in younger males were problems at work, firing/unemployment, financial distress. For females of the same age they were divorce and family conflicts. For males of older age they were the presence of somatic pathology, damage to the central nervous system, poor financial situation, in females of this age group - the presence of somatic pathology, CNS diseases, unfavorable financial situation and loneliness.

In males of the younger age group, anxious (in 10 (28.7%) males) and dysphoric (in 13 (37.1%) males) variants of psychogenic depression were typical, in females - adynamic (in 14 (40%) females) and dysthymic (in 12 (34.2%) females). In patients of the older age, the gender differentiation of clinical variants of depression disappears, however, in this age group, both among males and females, the proportion of people with the hypochondriacal variant of psychogenic depression significantly increased by 2.6 times (OR = 3.32, 95% CI [1.36- 8, 14]). *Prospects for Further Research:* the study of the main coping strategies of behavior in patients with psychogenic depression depending on the clinical variant of the course of the disease, as well as the development of an effective scheme for the differentiated treatment of patients with psychogenic depression depending on age, gender and clinical course.

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