

Screening of Generalized Anxiety and Depressive Symptoms in Patients with more than Two Physical Diseases of Age 60-80 Years in General Practice

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Abstract: ***Aim:** To investigate the prevalence of clinically pronounced and subsyndromal depressive and anxiety symptoms in patients with more than two bodily diseases; **Method:** A group of patients in the age range 60-80 years with more than two documented chronic bodily diseases was examined using the PHQ-9 and GAD-7 instruments as part of the PRIME-MD. The patients' health records were used to assess multimorbidity. The severity was assessed using the Cumulative Illness Rating Scale (CRIS). **Results:** Generalized anxiety and depressive syndromes are significantly more common in multimorbid patients. Multimorbidity (MM) is associated with a higher total score of PHQ-9 and GAD-7 and more severe levels of generalized anxiety and depressive symptoms than the general population. **Conclusion:** Multimorbidity is the rule rather than the exception at late age. Diagnosis of generalized anxiety and depression in patients with multimorbidity may be difficult due to the manifestation of depressive and anxiety symptoms such as somatic symptoms.*

Keywords: generalized anxiety, depression, multimorbidity

1. Introduction

The change of the socio-economic situation in Bulgaria, the change of the primary life stereotypes of people affected psychologically and economically most vulnerable groups of the population. The demographic situation has changed as a result of low birth rates, high mortality rates and migration. However, the health care system continues to focus on the "disease" rather than the "sick person". The incidence of chronic noncommunicable diseases has increased. In everyday outpatient consultative practice, patients with a single disease are usually rare. This is especially true for the age over 60, in which the presence of two or more physical disorders is a rule, a condition referred to as multimorbidity (MM). Evidence from various countries suggests that multimorbidity is becoming more common. Studies indicate that multimorbidity is not only becoming the norm, but is emerging earlier in the life course, particularly for low-income and obese individuals [3]. Multimorbidity-related psychological disorders remain a poorly studied area in general, and such studies are lacking in Bulgaria.

It is now well established that there is significant comorbidity of mental disorders, particularly mood disorders, with chronic physical conditions [2, 8, 10, 16]. These associations have considerable individual and public health significance, treatment costs and mortality risk [12, 16, 17].

Anxiety and depressive disorders often co-occur. Population surveys have found that about those with a current mood disorder also have a comorbid anxiety disorder [12]. It is not known whether the association of anxiety disorder with multiple chronic physical conditions might be due to comorbid mood disorder, or conversely, whether the association of mood disorders with multiple chronic physical conditions might be due to comorbid anxiety disorder.

Aim

To investigate the prevalence of clinically pronounced and subsyndromal depressive and anxiety symptoms in patients with more than two somatic diseases in the age of 60-80 years in general practice

Objectives

To test the hypothesis that having more than two physical disorders is a predictor of depression and generalized anxiety; to investigate the relationship between the number of physical disorders and anxiety symptoms; to investigate the relationship between anxiety and severity of bodily symptoms; to investigate the relationship between depressive symptoms and the severity of somatic symptoms; to investigate the relationship between number of physical physical and depressive symptoms; to study gender differences in multimorbid patients with generalized anxiety and depression.

2. Methodology

For the purpose of this study, medical records of 1,128 patients in general practice were examined. The somatic comorbidity and its severity were assessed using the Cumulative Illness Rating Scale.

Including criteria were:

- Age over 60 years
- Documented more than two chronic physical disorders

Exclusion criteria:

- Severe dementia
- Aphasia, severe hemiplegia
- Terminal states
- Psychotic conditions, schizophrenia
- Disagreement to participate

Depression was evaluated using the Bulgarian version of PHQ-9, tested and validated by Prof. P. Marinov. The PHQ-9 is a fast-running, cost-effective test that measures depression both categorically (small, large) and dimensionally (severity). It is congruent with DSM-IV, its sensitivity is 0.77 and its specificity is 0.94. The number of points that can be obtained varies from 0 to 27. As noted above, in addition to severity, this tool also categorically measures depression [1]. The Major Depression Diagnosis Requirement is the affirmative answer to one of the first two questions and the presence of 5 of the 9 symptoms listed subsequently for most of the day. Diagnosis Minor depression also requires a positive answer to one of the first two questions and two to four of the listed symptoms for most of the day.

Generalized anxiety was assessed using the GAD-7 Anxiety Scale as part of the PRIME-MD tool validated in Bulgarian by Prof. Peter Marinov. GAD-7 is a Generalized Anxiety Rating Scale according to the criteria of the DSM-IV [1]. It contains seven questions, each rated from 0 to 3 points, with a maximum score of 21 points. There is no anxiety disorder at the score of 0-4 points, there is a slight disturbance at 5-9 points, moderate to 10-14 points and severe anxiety disorder at the result of 15-21 points.

The Ethics Committee of the State Psychiatric Hospital-Karlukovo approved the study.

3. Results

Of the 1,128 patients, 341 [33.1%] were over 60 years old. Of these, 249 [73.0%] had more than two somatic diseases; 71 [20.7%] with one disease; 56 [16.4%] without somatic disease. 35 no covered the inclusion criteria: 2 with aphasia;

2 in terminal status; 4 with dementia; 1 with schizophrenia and 26 refused to participate. Thus, 214 [62.9%] patients were allocated to the study as follows: 101 [29.6%] with two diseases; 66 [19.4%] with three; 28 [8.3%] with four and 19 [5.6%] - with five or more physical disorders[Figure 1].

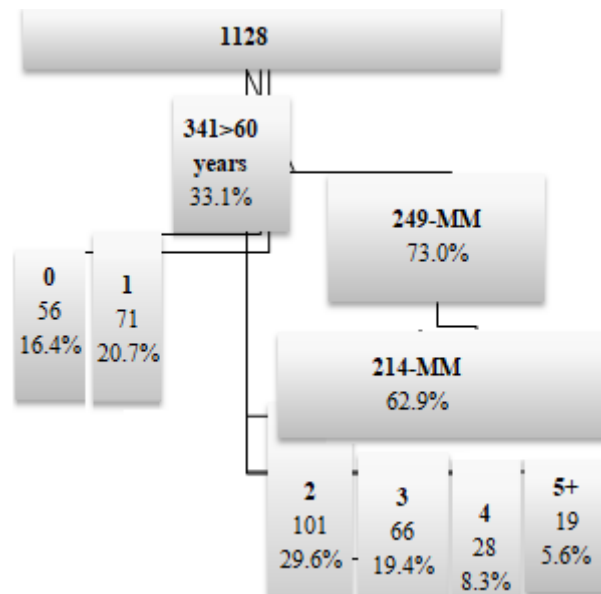


Figure 1

The most common somatic diseases are presented on Figure 2:

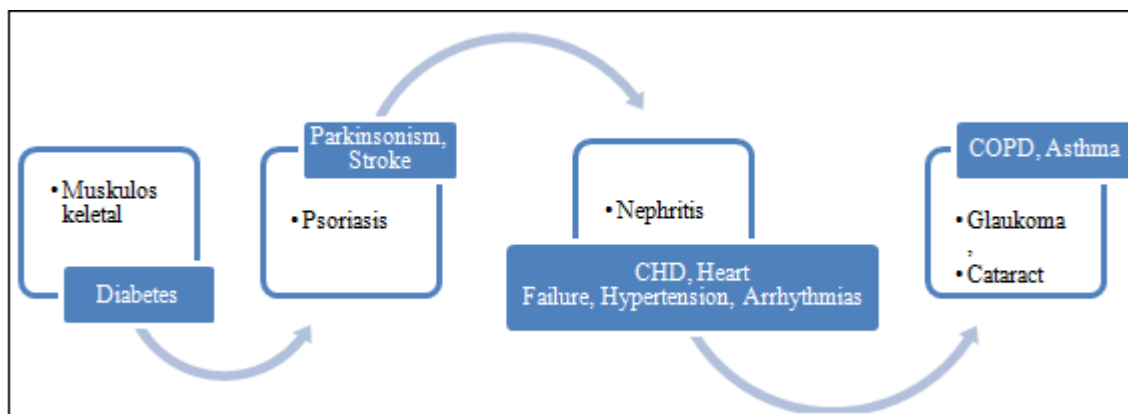


Figure 2

In this study, we did not find any specific patterns of clinical presentation of multimorbidity. Multimorbidity severity distribution is presented in Table No.1 as measured by the Cumulative Illness Rating Scale Index (CIRS Index);

Table 1: Distribution by severity of multimorbidity

CIRS Index	0-1	1-2	2-3	3-4
No. f patients	67	59	79	9
Male	30	21	29	3
Female	37	38	50	6

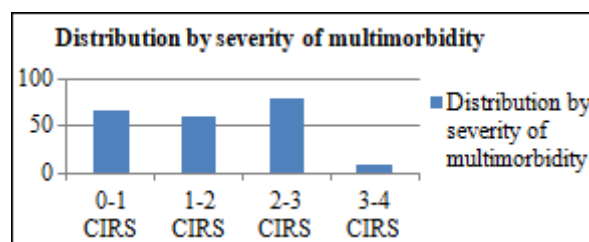


Figure 3

Table 2: Distribution by gender and number of diseases(SD)

No. of som. diseases	Male-86(40.2%)	Female-128(59.8%)
2	43(20.1%)	58 (27.1%)
3	24 (11.2%)	42 (19.7%)
4	11 (5.1%)	17 (7.9%)
5+	8 (3.7%)	11 (5.1%)

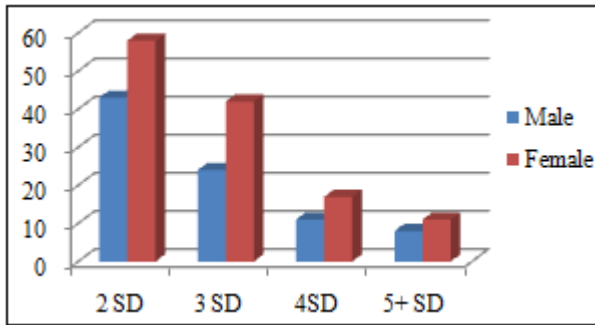


Figure 4

Table 3: Distribution of patients on PHQ-9 scale

PHQ-9 points	No. of patients	%
0-4	99	46.3%
5-9	53	24.8%
10-14	32	14.9%
15-19	26	12.1%
20-27	4	1.9%

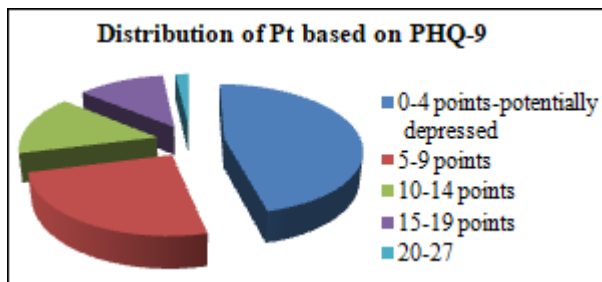


Figure 5

In the group of 0-4 points the distribution is as follows:

- 0 points-27 patients; 1 point-23 patients; 2 points-21 patients; 3 points-14 patients; 4 points-15 patients
- In the 5-9-point group, 49 patients reported experiencing one-day / several-day symptoms of anhedonia or dysthymia, representing 94.1% of patients.

In our opinion, these patients are potentially depressed.

The most common symptoms were:

Fatigue-72.3%; sleep problems-71.4%; problems with concentration of attention-54.6%.

The most rare symptoms were:

suicidal thoughts-12.7%; experience of a loser-14.3%.

Table 4: Distribution of depressive symptoms regarding the number of somatic illnesses

No. of somatic illnesses	No. of depressed patients	%
2	24/101	23.8%
3	21/66	31.8%
4	9/28	32.2%
5+	8/19	42.1%

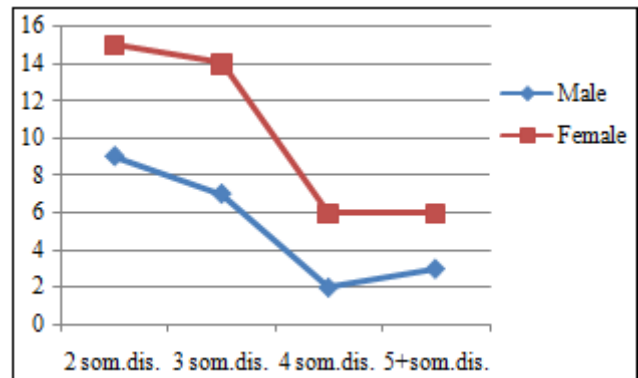


Figure 6: Distribution by gender

Table 5: Distribution of depression by the severity of multimorbidity:

CIRS Index	0-1	1-2	2-3	3-4
Number of Patients with MM+Depression	26	17	19	0

Table 6: Distribution of patients on the GAD-7 scale

GAD-7 points	No. of patients	%
15-21 - severe	16	7.47%
10-14 - moderate	25	11.68%
5-9 -light	36	16.82%

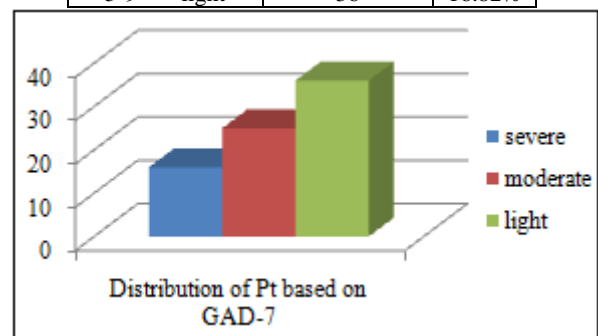


Figure 7

The most common symptoms were:

Easy fatigue - 81.23%; problems with sleep-79.41%; problems with concentration of attention-64.7%.

The most rare symptom were:

Muscle tension - 13.7%; feeling of lack of respect - 14.3%.

Table 7: Distribution of anxiety symptomatology and number of somatic diseases:

No. of somatic diseases	No. of patients with GAD	%
2	27/101	26.73%
3	21/66	31.81%
4	17/28	60.71%
5+	2/19	63.15%

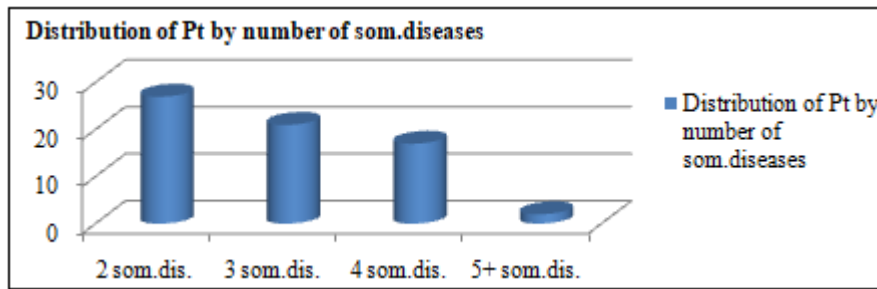


Figure 8

Table 8: Distribution by gender and number of somatic diseases

No. of somatic diseases	GAD- Male	GAD- Female
	26 (33.76%)	51 (62.33%)
2	10 (21.12%)	17 (27.46%)
3	7 (12.67%)	14 (16.90%)
4	5 (5.63%)	12 (7.75%)
5+	4 (2.81%)	8 (5.63%)

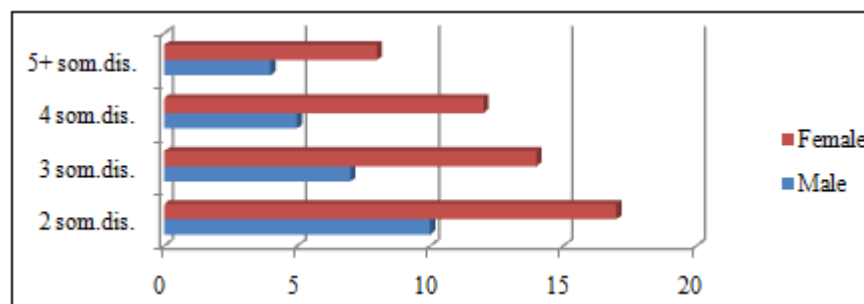


Figure 9

Table 9: Distribution of Generalized Anxiety regarding the Severity of Multimorbidity

CIRS Index	0-1	1-2	2-3	3-4
No. of patients with MM + GAD	25	18	19	15

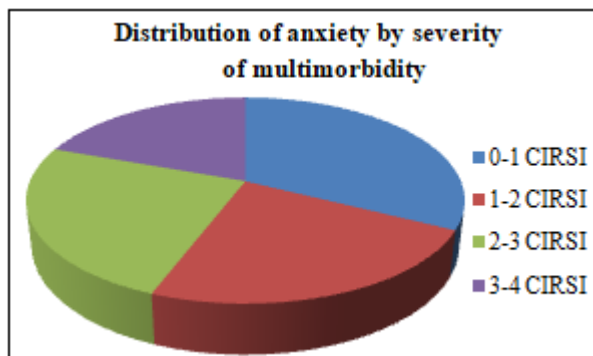


Figure 10

In the group of depressed patients 24 of them also showed symptoms of generalized anxiety, and in the group with generalized anxiety 29 of them showed also depressive symptoms - Table. 10

Table 10: Distribution of mixed depressive-anxiety symptomatology

Nature of symptomatology	No. of patients	%
Depression-anxiety	24/62	38.70%
Anxious-depressive	29/77	37.66%
Total	53/139	38.12%

4. Discussion

The results consistently showed that depressive and anxiety disorders were comparably related to chronic physical conditions. Comorbid depressive-anxiety disorder was more associated with several physical conditions than was non-comorbid depression and anxiety. There was considerable variability between physical conditions in their strength of association with mental disorders. The findings observed here that the physical conditions studied showed association with depressive and anxiety disorders is consistent with research highlighting the robust links between physical conditions and major depressive disorder [7]. The particular contributions of this report are two-fold: First, it confirms that anxiety and depressive disorders are independently associated with chronic physical conditions: comorbidity research has often focused on one [8] or other [7]. Second, this research produces the finding that having both depression and anxiety further increases the risk of a number of physical conditions co-occurring.

A limitation of this study is that physical conditions were ascertained by a standard checklist, rather than physician's examination. While acknowledging the limitation of self-report methods research indicates that self-report of diagnosis generally shows good agreement with medical records data [11;14], and importantly, the presence of depressive or anxiety symptoms has not been found to bias or inflate the self-report of diagnosed physical conditions [13].

The cross-sectional nature of this study limits conclusions

about the direction or causal nature of the relationships between mental disorder and physical conditions. Other research suggests that many of the physical conditions studied here the relationship with mental disorder may be bi-directional, involving a combination of biological and psychosocial mechanisms.[5].

It is clear that mental-physical comorbidity is clinically consequential; it has been shown to complicate treatment, alter disease course, contribute to disability and increase mortality risks [4].

From this clinical standpoint, the concurrent presentation of mental with physical disorder may be the critical issue, rather than the question of which disorder came first. However, many countries (including Bulgaria) manage the delivery of mental health services separately from that of general medical services, which is not optimal for the adequate recognition and treatment of mental-physical comorbidity [9]. Even where depressive and anxiety disorder are predominantly treated within general practice settings, they are typically under detected there [4; 15]. Moreover, while many primary clinicians may be aware of the associations between depression and physical conditions, they may be less aware of the connections observed in this study between anxiety disorders and physical conditions, despite the greater prevalence of anxiety disorders relative to depressive disorders [6]. Given the increasing prevalence of chronic conditions and possibly also anxiety and depressive disorders [12], improved understanding of the determinants, consequences and management of their comorbidity remains a research priority.

5. Conclusion

- Generalized anxiety is very common in the presence of more than two chronic illnesses
- Generalized anxiety is related to the number of physical illnesses, but not to their severity
- Multimorbidity is associated with high GAD-7 values
- Generalized anxiety is more common in women with multimorbidity
- GAD screening in patients with multimorbidity is underestimated
- GAD-7 is a fast, economical and informative test for detecting generalized anxiety in patients with multimorbidity in general practice
- Depressive symptoms are very common in the presence of more than two chronic physical ailments
- Depression is related to the number of physical ailments but not their severity
- Multimorbidity is associated with high PHQ-9 values
- Depressive symptoms are more common in women with multimorbidity
- PHQ-9 shows high levels of sub-syndromic depression in multimorbidity
- Depression screening in patients with multimorbidity is underestimated
- PHQ-9 is a fast, economical and informative test for the detection of depression in patients with multimorbidity in general practice

- PHQ-9 has the advantage of containing somatic symptoms that most commonly present with depression in multimorbidity

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