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Original article

SCREENING AND RISK ASSESSMENT FOR DEPRESSION IN COMMUNITY PHARMACY- PILOT STUDY

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SUMMARY

Background: Depression is the most common mental illness affecting more than 300 million people worldwide and is a significant risk factor for morbidity and mortality. In most cases, it may remain undetected in primary care. Comprehensive screening tools for diagnosing depression might facilitate early detection. As the most accessible health professionals, pharmacists can play an important role in helping to identify individuals at risk.

Objective: To differentiate individuals at risk of depression who are seeking a pharmacist consultation and are promptly directed to a psychiatrist.

Methods: Depression screening tools The Patient Health Questionnaire (PHQ-2) and (PHQ-9) were applied to 83 individuals with symptoms such as feeling down, tiredness and sleep disturbances for more than 2 weeks, who seek consultation at a pharmacy. Screening with the PHQ-2 was the first step. Patients who screen positive were further evaluated with the PHQ-9.

Results: In 70% of the individuals, the PHQ-2 test was positive. After completing PHQ-9, it was found that approximately 55% out of them had indications of mild to moderate depression and were directed to a psychiatrist for further evaluation. Over 50% of suspected depressive individuals had a concomitant chronic disease.

Conclusion: Screening for depression should be a routine part of healthcare. Particular attention should be paid to patients with comorbid chronic illnesses, as depression often remains hidden, thus leading to more difficult diagnosis and treatment. Screening would also increase the recognition of depression in patients who have few emotional symptoms but many somatic ones.

Keywords: depression, screening, Patient Health Questionnaire, community pharmacy, cardiovascular diseases

INTRODUCTION:

Depression is the most common mental illness affecting more than 300 million people worldwide and is a significant risk factor for morbidity, disability and mortality**.** According to data from Eurostat (extracted in January 2017), in 2014 at EU-28 level 3.5 % of the population in Bulgaria reported having chronic depression [1]. Depression has been predicted to be the leading cause of disease burden in 2030 by the World Health Organization (WHO) [2]. It is widespread among people of all ages and social backgrounds, with women being twice as likely as men. The disease usually occurs during the third and fourth decades of life, with an increase in frequency and a reduction in the age of the disease occurring in recent years. In most cases, it may remain undetected in primary care. The high prevalence of depression in patients with physical disorders requires the identification of vulnerable individuals as an important step in the further of these patients.

For that reason, comprehensive screening tools for diagnosing depression might facilitate its early detection [3]. Such screening tools should assess the possibility of depression even in individuals presenting primarily with somatic symptoms and relevantly inform about their general health. Primary care medical specialists should be familiar from one side with the signs and symptoms of depression and on the other -with the popular terms that people use concerning emotional problems. There are some relevant questions that could assist in the identification of depressive symptoms. Although screening self-administrating tools are not diagnostic tools they indicate the need for further evaluation.

The role of pharmacists is not generally accepted and comprehensively defined, but with the growing number of mental disorders and their great impact on patients' everyday life, they will be successfully positioned in the multidisciplinary mental health care teams [4].

The aim of our study is to differentiate individuals at risk of depression who have been consulted by a phar-

macist and further referred to a specialist.

METHODS:

The Patient Health Questionnaire (PHQ2) and (PHQ9) were applied to 83 individuals (mean age 57,8 years) with some characteristic symptoms as feeling down, tiredness and sleep disturbances for more than 2 weeks, who sought consultation at a pharmacy.

The PHQ-2 is a screening tool that inquires about the frequency of depressed mood and anhedonia over the past 2 weeks, scoring each item as 0 ("not at all") to 3 ("nearly every day") with a score ranging from 0 to 6. The authors identified a cut-off score of 3 as the optimal cut point for screening purposes and stated that a cut point of 2 would enhance sensitivity. Patients who screen positive should be further evaluated with the PHQ-9, other diagnostic instruments or direct interview to determine whether they meet criteria for a depressive disorder [5, 6]. A PHQ-2 score of greater than 3 has a sensitivity of 83% and a specificity of 92% for major depression [7]. The PHQ-2 includes the first 2 items of PHQ-9: "Little interest or pleasure in doing things" and "Feeling down, depressed, or hopeless."

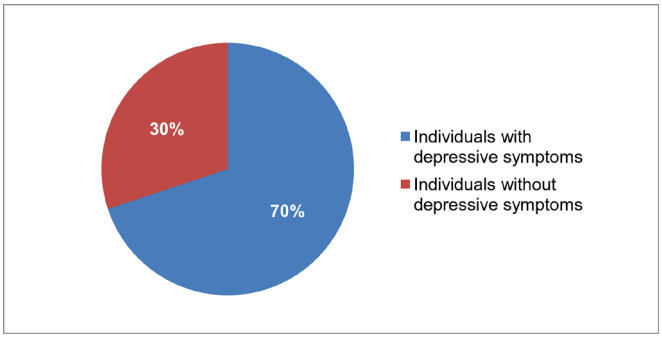
The PHQ-9 is a potentially valuable tool for diagnosis and management of depression because it can generate a diagnosis of major depression, as well a continuous score to monitor treatment. The PHQ-9 has 9 questions with a score ranging from 0 to 3 for each question (maximum score of 27). The PHQ-9 establishes the clinical symptoms of depression. The cut point of the PHQ-9 is equal or greater than 10, which has a sensitivity of 88% and a specificity of 88% for major depression [8]. A threshold score of 15 or more is used in some settings to consider initiating treatment with antidepressants [9]. Once the PHQ-9 is completed, and the test proves to be positive, the patient should be directed to a psychiatrist [10, 11, 12].

Descriptive statistics were used to calculate relative share and average values. A graphic analysis has been made. The processing of the results and the construction of the graphics were done with MS Excel.

RESULTS AND DISCUSSION:

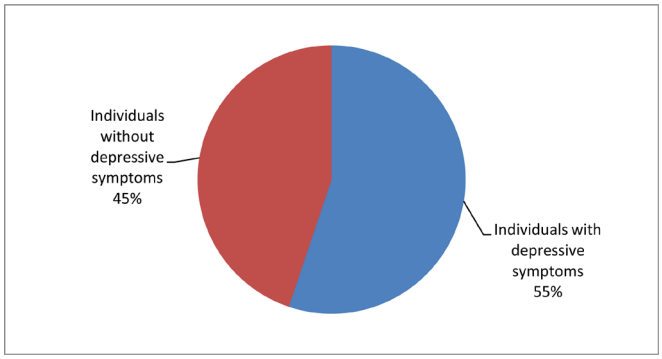
According to the data from PHQ-2, positive for depressive symptoms were 70% of individuals. The distribution of participants with positive PHQ-2 is presented in Fig.1.

Fig. 1. Screening with the PHQ-2



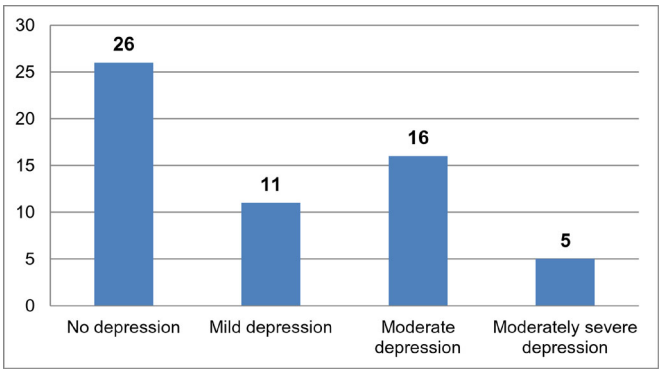
Patients who screen positive by PHQ-2 were further evaluated with the PHQ-9. It was found that approximately 55% of the individuals had indications of mild to moderate depression and were directed to a psychiatrist to confirm the diagnosis (fig.2).

Fig. 2. Screening with the PHQ-9



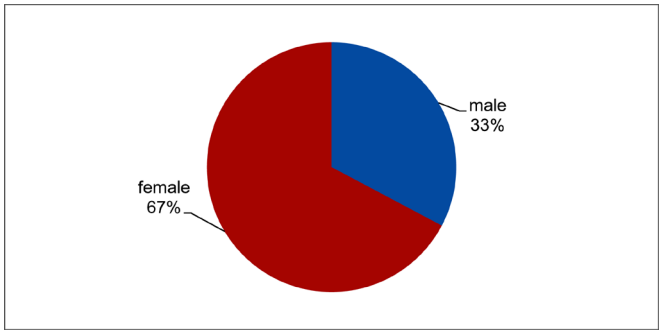
The severity of depression by PHQ-9 is shown in fig. 3. As it is seen, 26 individuals had no symptoms of depression, 11 individuals presented with scores for mild depression and 16 individuals with moderate depression and 5 individuals with moderately severe depression.

Fig. 3. Depression severity by PHQ-9



Gender and age are factors influencing depressive symptoms [13]. In men, depression is definitely less common. In our study, females (67%) were twice more likely to develop depression than male individuals- (33%) (fig. 4).

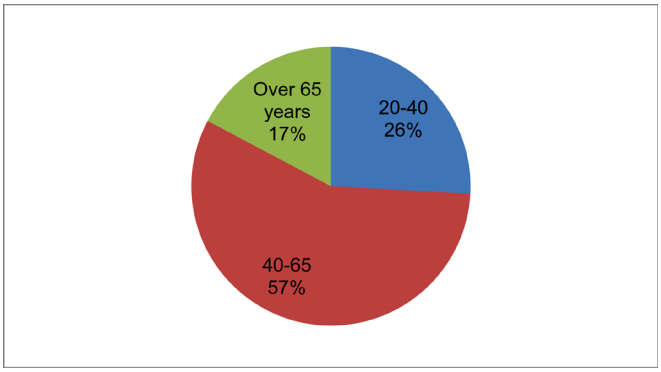
Fig. 4. Gender distribution of individuals with depressive symptoms by PHQ-9



For both genders, depression is most common in those who are 25-44 years of age, and least common for those over the age of 65. According to some authors rates of MDD are by and large lower in healthy community-dwelling elderly persons than in younger adult populations, ranging from 1% to 3% [14]. It should be pointed out that these rates depend on factors as different settings, medical and psychiatric comorbidity, social conditions etc. Most common, hereditary factors and personality traits are associated with the early onset, while vascular cognitive impairment is associated with the late onset.

In our study, the proportion of individuals with depressive symptoms in the 40-65 age group was the highest (57%), followed by the 20-40 age group (26%) and over 65 years 17% of participants were with positive for depression PHQ-9 (Fig. 5).

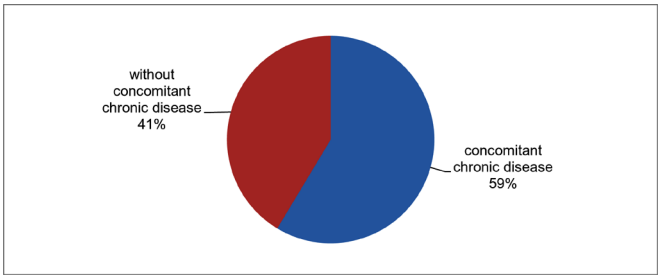
Fig. 5. Distribution of age groups



Depressive disorders are highly comorbid with somatic diseases [15]. This comorbidity significantly impacts the clinical presentation of depression, impedes the outcomes both of depression and of the physical disorders, increase mortality and medical costs than when these conditions are present alone. We should bear in mind that depressive somatic symptoms may mask the somatic disease.

Our study found that over 50% of individuals suspected of depression have a concomitant chronic disease (Fig.6).

Fig. 6. Individuals with depressive symptoms and concomitant chronic disease

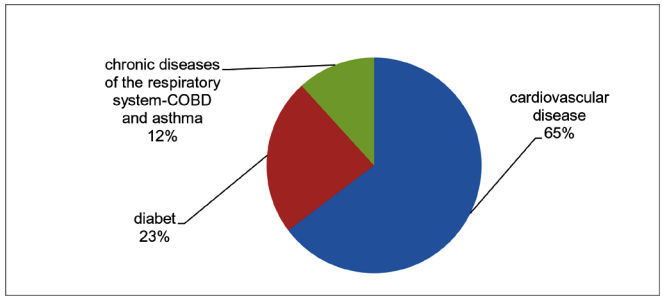


In recent years, there has been much evidence of the link between depression and cardiovascular disease (CVD) [16]. The incidence of clinical depression in patients with coronary artery disease is three times higher than in the general population. Approximately every sixth patient with acute myocardial infarction unfolds a major depressive episode, which in one-third of cases does not respond satisfactorily to the usual treatment. Myocardial infarction combined with depression results in much higher mortality within 6 months compared to patients who are not affected by the depressive disorder. According to American Heart Association (AHA) recommendations, patients with cardiovascular disease should be regularly screened for depression [17].

Another important comorbidity is type 2 diabetes [18]. There is evidence that the prevalence of depression is significantly higher in patients with type 2 diabetes than in those without, the relative risk for the occurrence of depression after diabetes being 1.15 and 1.6 for the occurrence of diabetes after depression with the comment that depression is a stronger risk factor for the development of depression than the reverse [19, 20, 21].

The results of our study are consistent with the literature data and show that the largest share is positive for PHQ-9 and concomitant cardiovascular disease– 65%. This includes patients with hypertension, ischemic heart disease. Second come individuals with diabetes 23%, followed by those with chronic respiratory diseases, including chronic obstructive pulmonary disease and asthma- 12%. The distribution of the most common chronic diseases in PHQ-9 depressive symptomatology individuals is presented in Fig.7.

Fig. 7. Comorbid chronic physical diseases in depression



CONCLUSION

Depression screenings should be a routine part of healthcare. Regardless of the limitations of self-reported depression screening tools, it is better to use them to screen for depression than risk missing patients who are suffering from a depressive disorder. Particular attention should be paid to patients with chronic illnesses, as depression often remains hidden and due to significant comorbidity, leading to more difficult diagnosis and treatment. Particular attention should be paid to patients suffering from cardiovascular disorders. These patients should be regularly monitored for depression. Effective treatment of depression aims to improve the emotional, physical, social functioning and quality of life of the patients, to reduce the health care needs and decrease mortality.

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