PREVALENCE OF DEPRESSIVE AND ANXIETY SYMPTOMS IN VERY OLD POPULATION COMPARED TO OLD POPULATION

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Abstract
INTRODUCTION. The number of old people is increasing fast in both developed and underdeveloped countries. Both depression and anxiety have high prevalence in the old age group. There are some conflicting reports regarding the prevalence of depression and anxiety across separate older age groups. The purpose of our study is to compare the prevalence of depression and anxiety in the old age group with very old age group.

OBJECTIVES. We compared the prevalence of depression and anxiety in two groups of old people, the first one aged 60–79 years and the second one with aged ≥80 years.

METHODS. We applied the Hospital Anxiety and Depression Scale (HADS) to 82 of people aged ≥60 years. HADS is a self-rating scale with 14 items, 7 attributed to depression and 7 to anxiety symptoms (27). On each item, the patient can score from 0 to 3, meaning that a person can score between 0 and 21 for either anxiety or depression; the cut-off point is ≥8 for anxiety or depression. Then we compared with chi-square the differences in prevalence of depression and anxiety in the two age groups.

RESULTS. From the total number of very old, 83.33% experienced depression compared to 42.85% from their younger counterpart. A statistically significant higher percent from the very old compared to the old people experienced depression: OR=1.309, CI=1.066-1.609, p=.005.

From the total number of the old patients, a number of 71.4% presented anxiety compared to 58.3% from the very old age group, without statistically significant differences between the two groups: OR=.686, CI=.319-1.474, p=.498.

CONCLUSIONS. Depression and anxiety are present with very high rates of prevalence in the old age patients. Still, there is an increase in risk for depression in the very old age group. More research for identifying risk and protective factors in different segments of the old age people are necessary for both depression and anxiety.

Keywords: advanced age, depression, anxiety.

Rezumat
INTRODUCERE. Numarul persoanelor varstnice este în creștere rapidă atât în tarile dezvoltate cât și în tarile în curs de dezvoltare. Atât depresia cat si anxietatea prezinta o prevalenta crescuta în aceasta varsta. Exista date contradictorii in ceea ce priveste prevalenta acestor doua afectiuni la diferite subgrupuri de varsta in cadrul grupului mai mare al persoanelor varstnice. Scopul studiului nostru este de a compara prevalenta depresiei si a anxietatii la pacientii foarte varstnici versus pacientii varstnici.

OBJECTIVE. Am comparat prevalenta depresiei si a anxietatii intre doua grupe de pacienti varstnici, primul grup (varstnici) cu varsta cuprinsa intre 60-79 ani iar al doilea grup (foarte varstnici) cu varsta ≥80 ani.

METODE. Am aplicat scala Hospital Anxiety and Depression Scale (HADS) unui grup de 82 de persoane cu varsta ≥ 60 ani. HADS este o scala auto-administrata cu 14 itemi, 7 dedicati depresiei si 7 anxietatii. La fiecare item se poate scoara cu valori intre 0-3, astfel incat o persoana poate obtine scoruri intre 0-21 pentru depresie sau pentru anxietate. Scopul la care o persoana este considerata a avea depresie sau anxietate este de ≥8. Am comparat apoi cu functia chi-square prevalenta depresiei si a anxietatii in cele doua grupe de varsta.

REZULTATE. Din numarul total al persoanelor din grupul “foarte varstnici” am gasit un procent 83.33% cu depresie, in comparatie cu 42.85% in grupul “varstnici”. O proportie statistic semnificativa mai mare din grupul “foarte varstnici” au prezentat depresie comparativ cu cei din grupul “varstnici”: OR=1.309, CI=1.066-1.609, p=.005. Din numarul total al persoanelor din grupul “varstnici” 71.4% au prezentat anxietate comparativ cu 58.3% din grupul “foarte varstnici”, neexistand diferente semnificative statistice intre cele doua grupuri: OR=.686, CI=.319-1.474, p=.498.

CONCLUSII. Depresia si anxietatea prezinta rate crescute ale prevalentei in general la indivizii varstnici. Exista o proportie statistic semnificativa mai mare de pacienti cu depresie in grupul persoanelor “foarte varstnici” comparativ cu grupul “varstnici”. Studii suplimentare sunt necesare pentru identificarea factorilor de risc si ai celor protectivi la diferite subgrupe de varsta ce fac parte din grupul mare al pacientilor varstnici.

Cuvinte cheie: varsta avansata, depresie, anxietate.
INTRODUCTION
The number of the old people is increasing fast in both developed and underdeveloped countries (1), and all the projecting suggests that in 2030 will live about one billion people over 65 years, representing 13 % from the total world population (2). There are different arbitrary criteria for the definition of the old and very old people (3, 4). In our paper we will use ≥ 60 for old people and ≥ 80 for very old people. The data of an important meta-analysis (5) showed a high prevalence of depression and anxiety in the old age group (not separated in old age and very old age groups). Point prevalence for major depression was 3.29% and lifetime prevalence 16.52 %. For minor depression data (6) indicated 10.4 % of point prevalence. Both major and minor depression (7) are associated with an entire cohort of deleterious effects including increased risk for suicide, coronary disease, stroke and a poor outcome of somatic illnesses (8). Usually the diagnosis of depression in old people is obtained mainly in primary care. However, data (9) suggests that almost half of the cases go undetected in primary care. Unrecognised causes of depression represents a much too common cause of disability and reduced well-being (9). Some (10, 11) studies indicate, in both genders an increasing of the prevalence of depression with increasing age. Further studies (12) reported the decline of depression with increasing age, while others (13, 14) reported no significant trends of the prevalence of depression with increasing age. Studies (15, 16) regarding the prevalence of anxiety in old age also indicates high values of 3.2% to 15.3% in community-based studies. Yet there are between 15–52.3% of older adults manifesting subclinical levels of anxiety symptoms that are also distressing to everyday life (17).

Anxiety disorders in elderly are also associated with and important degree of disability and an increased risk of overall mortality (18).

There are some conflicting reports regarding the prevalence of anxiety disorders across separate older age groups. Some (19, 20) suggest a decrease of the prevalence of anxiety disorders with increasing age (in the first study a 4.3% prevalence estimated for current anxiety disorders in those aged 70–84 years old compared to a 2.3% prevalence for current anxiety disorders in those aged 85–103, and in the second study 8.0% of those 65–74 years old had an anxiety disorder in the past 12 months compared to 5.6% of those aged 75 years). Other authors (16) suggested that there may be important subgroups to consider within the category of the “older adults” with different risk for different old age periods (65–74 years-13.9%, 75–85 years-10.4% and 55–64 years-6.9%).

It is difficult to say from the current data if very old people are at increased risk for depression and anxiety compared to their younger counterpart. On one hand the very old people represent a vulnerable group to depression and anxiety because they frequently have risk factors for depression and anxiety such as frailty, a plethora of somatic diseases, bereavement and loneliness (21, 22). On the other hand, the group of very old people may represent a cohort of “survivors” of both somatic and mental illnesses which, due to their long life experience may better cope with adverse situations which may lead to depression or anxiety (23, 24). Moreover, both depression and anxiety might present lower values comparing to theirs’ younger groups as a consequence of selective survival (25, 26).

The data about the prevalence of depression and anxiety in the old age group compared to the very old age group is rather contradictory. The purpose of our paper is to compare the prevalence of depression and anxiety in the two above mentioned age groups in order to understand if increasing age in the old age people is associated with an increased prevalence of depression and anxiety. We compared the prevalence of depression and anxiety in two groups of old people, the first one aged 60–79 years and the second one aged ≥80 years.

MATERIAL AND METHODS
DESIGN
The data analysed refers to a population of elderly patients (age ≥60; N=82) included in a prospective study with 100 patients who presented for laboratory evaluations between 1st February and 30th June 2016 in the outpatient clinic of the National Institute of Gerontology and Geriatrics “Ana Aslan” (NIGG “Ana Aslan”), Bucharest, Romania. For all the participants, were recorded socio-demographic (gender, age, marital status, environmental origin, level of education, socio-economic status), and clinical (medical conditions) data. This study was approved by the Ethical Committee of the University of Medicine and Pharmacy of Craiova, Romania, and had a collaboration protocol with the outpatient clinic NIGG “Ana Aslan”. Details of the study were explained to the patients and a written consent was obtained from all the participants.

PSYCHOMETRIC TESTS
In order to evaluate the levels of depression and anxiety we used the Hospital Anxiety and Depression Scale (HADS). HADS is a self-rating scale with 14 items, 7 attributed to depression and 7 to anxiety symptoms (27). On each item, the patient can score from 0 to 3, meaning that a person can score between 0 and 21 for either anxiety or depression; the cut-off point is ≥ 8 for anxiety or depression (27). For depression (HADS-D) has a specificity of 0.79 and a sensitivity of 0.83. For anxiety (HADS-A) has a specificity of 0.78 and a sensitivity of 0.89 (28).

STATISTICAL ANALYSIS
Descriptive measures have been employed. We looked first if there are any differences, except age that in the two age groups: sex, socioeconomic status (as evaluated by “employed” or “retired” status) and somatic illnesses comorbidities. We used chi-square to compare the two groups regarding the above putative biases. Afterwards we compared the two groups in terms of prevalence of anxiety symptoms and depressive symptoms by using chi-square test. All the analysis has been performed using Statistical Package for the Social Sciences (SPSS) 22.

RESULTS
We identified a number of 70 patients in the old age group and a number of 12 patients in the group of very old age. The patients from the first group had a median age of 69.41 years (±5.92). This group was comprised of 46 females (65.7%), and most of the individuals lived in urban areas, N=65 (92.9%). Just 4 people still had a job,
while the rest, N=66 (94.3%) were retired. From this group 69 (98.6%) had at least one somatic illness and 33 (47.1%) had at least two somatic conditions. The patients from the second group had a median age of 84.25 years (±4.634), 6 were females (50%), most of them lived in urban areas, N = 11 (91.7%) and all of them were retired. All the patients from this group had at least one somatic illness and 8 (66.7%) had at least two medical conditions. There were no differences between the two groups regarding sex (OR = 0.904, CI = 0.737-1.109, p = 0.304), place of residence (OR = 0.974, CI = 0.637-1.410, p = 0.860), socio-economic status (OR = 0.846, CI = 0.770-0.930, p = 0.254) and the presence of one (OR = 1.174, CI = 1.072-1.286, p = 0.572) or two somatic illnesses (OR = 2.242, CI = 0.618-8.136, p = 0.208).

From the total number of the very old patients, 10 (83.33%) out of 12 experienced depression compared to 30 (42.85%) out 70 from their younger counterpart. A statistically significant higher percent from the very old group compared to the old group experienced depression: OR = 1.309, CI = 1.066-1.609, p = 0.005. From the total number of the old patients, a number of 50 out of 70 (71.4%) presented anxiety compared to 7 out of 12 (58.3%) from the very old age group, without significant statistic differences between the two groups: OR = 0.686, CI = 0.319-1.474, p = 0.498.

DISCUSSION
One important result of our study is that we found huge values of prevalence of depression and anxiety in old people (as an entire group). The people from the very old age group (≥ 80 years) presented a prevalence of depression of 83.3% and anxiety 58.3%.

By comparison the people from the old age group (60-79 years) had 42.85% depression and 71.4% anxiety. That data showed very high levels of depression and anxiety in both groups which indicates the need for an aggressive screening for depression and anxiety in the old age and very old age groups.

However, in the very old age group the prevalence of depression is statistically significant larger than in the old age group. This fact stands true in the condition were there were no differences between the two groups regarding the putative risk factors for depression: socio economic status or somatic comorbidities. On the other hand, the proportion of people with anxiety is higher in the old age group compared to the very old age group, even though it didn't reach statistical significance.

These facts may represent an argument for the theory that increasing age is indeed associated with increasing risk for depression, but not for anxiety, and that age may well operate differently in terms of risk for depression and anxiety in various subgroups of the old age people.

Even though there is data from genetics (29), clinical (30), therapeutic (30), and the very high comorbidity between depression and anxiety (31) that suggests an important degree of overlap between the two conditions, there is also significant data suggesting important differences between the two above conditions. Neuroimaging data suggests as Goodwin (30) stated: “supporting the existence of a common abnormality in anxiety and depression in the ventral cingulate and the amygdala, but with disorder specific compensation during implicit regulation of emotional processing apparently through engagement of cognitive control circuitry in the depressed group.”

It may be well that some of the neurobiological differences between the two conditions can explain the results we obtained, that increasing age is associated with increasing prevalence of depression but not anxiety. The design of the study precludes any definitive answers to this questions but raises some other possibilities: that increasing in age may be associated with different neurobiological/psychological changes that can increase the risk only for depression in the very old group, or maybe human brains are more prone, due to aging process, to rather develop depression than anxiety. That implies that risk and protective factors (be it neurobiological, psychological, social and so on) for depression and anxiety may express themselves different at different ages subgroups in the old age population and more refined work should be done in order to try to disentangle various contributors to these two common diseases in the old age population. Also this implies that old age should not be considered one big unique group but instead probably various age intervals of old age groups should be separately analyzed.

LIMITATIONS:
The main limitation of our study is the low number of patients in the very old age group. Yet we can make two speculations about this issue: the number of people with depression and anxiety is so high in this age group that even a very small group like ours may generate solid data. The second speculation is that the trend observed in the bigger old age group continues in the very old age group, suggesting that the results we obtained are correct.

CONCLUSIONS
Both depression and anxiety are present with very high prevalence rates in the old age patients. Still, there is an increase in risk for depression in the very old age group. More research for identifying risk and protective factors in different segments of the old age people is necessary for both depression and anxiety.

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