Prevalence of Anxiety and Depressive Disorders in a Sample of Moscow Residents: Comparison of the GAD-7 and HADS Results with a Clinical Assessment

Оценка распространенности тревожно-депрессивных расстройств на выборке жителей Москвы: сравнение данных самоопросников GAD-7 и HADS с клинической оценкой врача-психиатра

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Original research

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ABSTRACT

BACKGROUND: Anxiety and depressive disorders are the most common mental disorders. Detecting a disorder at an early stage can prevent the development of severe disorders and preserve the patient's functioning ability. Simple and reliable screening tools based on self-completion of questionnaires can be used for this purpose. However, it is not always the case that the scores of the self-questionnaire align with those of the clinician.

AIM: To estimate the prevalence of anxiety-depressive disorders using the GAD-7 and HADS self-report questionnaires compared to psychiatrist assessment.

METHODS: The study included individuals aged 18 to 65 years, living in Moscow, Russia, without psychiatric disorders, who participated in an online study using the HADS (Hospital Anxiety and Depression Scale, HADS-A and HADS-D) and GAD-7 (Generalized Anxiety Disorder 7-item scale). Anxiety disorder was diagnosed when the total score was ≥10 on the GAD-7 and/or ≥10 on the HADS-A scale, and depression was defined when the total score was ≥9 on the HADS-D scale. Then, 82 randomly selected participants attended an anonymous consultation with a psychiatrist.

RESULTS: The study included 1,097 individuals (72% female), median age 29 (23; 37) years. As a result of testing, anxiety disorder was found in 168 (15%); depressive disorder — in 152 (14%) respondents. At medical verification, anxiety was diagnosed in 18 (22%); depression — in 19 (23%) people. The sensitivity of the HADS-D subscale for physician-diagnosed cases of depression was 61%, and specificity was 73%. The sensitivity of the HADS-A and GTR-7 subscale in identifying cases of anxiety disorder was 58%, specificity 59%. Sixteen percent were first diagnosed with a personality disorder or schizotypal disorder.

CONCLUSION: The level of anxiety and depression in our sample of the population of Moscow, Russia, was higher than the global level. Self-assessment based on the questionnaire seems to not fully reflect the real state of a patient, as evidenced by the differences with the psychiatrist's assessment.

АННОТАЦИЯ

ВВЕДЕНИЕ: Тревожные и депрессивные расстройства — наиболее распространенные психиатрические заболевания. Выявление патологии на ранней стадии может предотвратить развитие серьезных нарушений и сохранить работоспособность пациента. В этом могут помочь простые и надежные скрининговые инструменты, основанные на самостоятельном заполнении опросников. Однако не всегда оценки самоопросника совпадают с клинической оценкой специалиста.

ЦЕЛЬ: Оценить распространенность тревожно-депрессивных расстройств с помощью госпитальной шкалы тревоги и депрессии (Hospital Anxiety and Depression Scale, HADS) и самоопросника генерализованного тревожного расстройства (Generalized Anxiety Disorder-7, GAD-7) и сравнить результат с клиническим заключением психиатра.

МЕТОДЫ: В исследование включили лиц без психических расстройств от 18 до 65 лет, проживавших в г. Москве, которые приняли участие в онлайн-опросе с применением шкал HADS (HADS-A и HADS-D) и GAD-7. Тревожное расстройство определяли при суммарной оценке ≥10 баллов по GAD-7 и/или ≥10 баллов по шкале HADS-A, депрессию — при ≥9 баллов по шкале HADS-D. Затем 82 случайно отобранных участника прошли анонимную консультацию психиатра.

РЕЗУЛЬТАТЫ: В исследование включили 1097 человек (72% женщины), средний возраст 29 (23; 37) лет. В результате тестирования тревожное расстройство обнаружено у 168 (15%), депрессивное расстройство — у 152 (14%) опрошенных. По результатам врачебной диагностики тревога диагностирована у 18 (22%), депрессия — у 19 (23%) человек. Чувствительность подшкалы HADS-D в отношении случаев депрессии, диагностированных врачами, составила 61%, специфичность — 73%. Чувствительность подшкалы HADS-A и GAD-7 при выявлении случаев тревожного расстройства составила 58%, специфичность 59%. У 16% впервые диагностировали расстройства личности или шизотипическое расстройство.

ЗАКЛЮЧЕНИЕ: Уровень тревоги и депрессии в данной выборке из популяции г. Москва оказался повышен. Самооценка по опроснику не в полной мере отражает реальное состояние человека, о чем свидетельствуют несоответствия с оценкой психиатра.

Keywords: *depression; anxiety; urban population; GAD-7; HADS*
Ключевые слова: *депрессия; тревога; городская популяция; GAD-7; HADS*

INTRODUCTION

Today, anxiety and depressive disorders are becoming increasingly relevant, particularly in urban areas. These conditions are largely the result of the ongoing social, economic, and other challenges of our time [1]. It is estimated that over 300 million people worldwide (4.05% of the global population) suffer from anxiety [2], while around 280 million (3.8% of the population) experience depressive disorders.[1] According to the Institute for Health Metrics and Evaluation, in Russia, approximately 5,453,800 people (about 3.8%) are affected by depressive disorders, and 4,999,400 people (about 3.5%) suffer from anxiety disorders. These mental health conditions are among the most widespread in the general population.[2]

The World Health Organization (WHO) predicts that the prevalence of these disorders will rise significantly, with depressive disorders projected to become one of the most common types of disorders by 2030.[3] The highest rates of anxiety and depressive disorders are borne by adolescents [3] and young adults — an active and working population. Recent data from 2022–2023 likewise show an increase in the prevalence of these disorders in Russia.[4] In the ESSE-RF study, clinical depression on the Hospital Anxiety and Depression Scale (HADS) ≥11 points was observed in 4.5% of the study cohort (men — 3.4% and women — 5.4%); and anxiety, in 6.8% (men — 4.0% and women — 5.4%) [4].

Chronic anxiety and depressive disorders can indirectly contribute to the development of various somatic conditions, such as gastrointestinal disorders, allergic reactions, respiratory issues, cardiovascular diseases, frequent headaches, migraines, etc. Early detection of these mental health disorders can prevent the onset of more serious complications and help maintain a patient's overall ability to function [5]. Additionally, whenever a patient voices somatic complaints, it is important to rule out underlying anxiety or depression [6].

Therefore, simple and reliable screening tools for these conditions are essential. Screening can be effectively conducted using psychometric self-assessment scales [7], which provide a quick and easy method of preliminary diagnosis.

Among the most commonly used self-assessment scales are the HADS [8] and the Generalized Anxiety Disorder 7-item scales (GAD-7) [9]. These tools have been validated for identifying anxiety and depressive disorders in patients with various conditions, including cancer [10], heart disease [11, 12], neuropsychiatric disorders [13], and irritable bowel syndrome [14]. While the GAD-7 scale has not been officially validated in Russia, a Russian-language version has been adapted [15]. In 2023, the validation results of the Russian-language version of the HADS scale were published [16].

Based on studies involving different cohorts, the prevalence of anxiety, as measured on the HADS-A scale, was found to be 26% among cancer patients [17], 12% in patients with coronary heart diseases [18], 16% in those with cardiovascular diseases or diabetes [19], 14% in patients with irritable bowel syndrome, and 11% in those with chronic thromboembolic pulmonary hypertension, according to the GAD-7 scale [20]. The prevalence of depression according to the HADS-D scale was 28% in the cancer cohort [17], 20% in patients with irritable bowel syndrome [20], and 28% in patients with cardiovascular diseases or diabetes [19]. The authors observed comparable levels of anxiety in individuals with coronary heart diseases when compared to a European sample assessed using the same protocol, while they noted a higher incidence of depression in the Russian population [18]. In a previous study, we had evaluated anxiety levels among healthcare workers, revealing an increase from 16.09% in 2020 to 39.08% in 2022, alongside a rise in depression from 8.05% to 13.79%. This increase in anxiety severity contrasts with findings from earlier longitudinal studies [21].

However, the previous study had a limitation in that anxiety and depression were measured using self-reported scales (HADS), which may be prone to bias or inaccuracies due to the subjective nature of the responses. Self-assessments can also be misleading since anxiety symptoms may resemble those of somatic diseases, potentially leading to an underestimation of anxiety levels. Additionally, these symptoms can overlap with those of other mental health conditions [22]. To address potential inaccuracies stemming from this limitation, we added an additional

[1] World Health Organization (WHO). Depressive disorder (depression). Available from: https://www.who.int/news-room/fact-sheets/detail/depression

[2] About 4 million Russians suffer from mental disorders. In Russian. Available from: https://www.interfax.ru/russia/945840

[3] Global status report on physical activity 2022. Available from: https://iris.who.int/bitstream/handle/10665/363607/9789240059153-eng.pdf?sequence=1

[4] Quarterly forecast of GDP. In Russian. Available from: https://ecfor.ru/publication/kvartalnyj-prognoz-ekonomiki-vypusk-55

anxiety scale, the GAD-7, and evaluated the prevalence of anxiety and depressive disorders in a random sample of patients who had undergone psychiatric consultations.

Therefore, the aim of this study was to assess the prevalence of anxiety and depressive states using self-reported questionnaires in a sample of Moscow residents, followed by a comparison of these self-assessments with a psychiatrist's diagnosis.

METHODS

Study design

We conducted a cross-sectional study to assess the prevalence of anxiety and depression using screening scales, followed by clinical (physician) validation of the respondents' mental states.

Setting

The study involved 1,097 male and female participants aged 18 to 65, recruited from the Moscow population between June 2022 and September 2023.

Participants

Participants were volunteers who had responded to an invitation on social media to participate in an examination for mental disorders. Individuals with a previously diagnosed mental disorder or severe somatic diseases were excluded. The announcement provided information about the study's goals and objectives, study site, and eligibility criteria. Participants received the testing materials electronically via the Google Forms online tool (Google LLC, USA). They were asked to provide their sex, age, education level (none, primary, incomplete secondary, complete secondary, higher, academic, or degree postgraduate), place of residence, and respond to questions from the GAD-7 and HADS scales. Each participant could submit their information only once during a single session, after which they could not revisit the study results. However, participants were allowed to revise their answers while filling out the electronic form; leaving any questionnaire items blank was not permitted.

Next, 100 individuals who responded to the online questionnaire were randomly selected using the Lotto function in Excel VBA for this study. They were contacted by phone and invited to participate in a free, anonymous in-person consultation with a psychiatrist. Potential participants were informed that the consultation aimed to verify the results of the psychometric testing conducted for research purposes. If they agreed to participate, they were given the option to select a convenient date from the available slots for a visit.

At the time of the consultation, physicians, like the study participants, were unaware of the psychometric testing results. Based on the consultation outcomes, doctors diagnosed any mental disorders present in the subjects according to ICD-10 criteria.[5]

Anxiety and depression assessment scales

In this study focused on developing a method for assessing the risk of mental disorders, psychometric testing was performed using the GAD-7 and HADS scales, both adapted into Russian. The GAD-7 scale (sensitivity 89%, specificity 82% [23]) consists of seven items, each with four response options ranked from 0 to 3 points based on the severity of anxiety symptoms [24]. The HADS scale includes two subscales: anxiety (HADS-A, specificity 94.0%, sensitivity 73.8%) and depression (HADS-D, sensitivity 72.9%, specificity 92.5%) [25]. Each subscale consists of seven items with four answer options that reflect the severity of symptoms, ranging from 0 (absence) to 3 (maximum severity) [26]. Anxiety was identified with a total score of ≥10 points on the GAD-7 [23] scale and/or ≥10 points on the HADS-A scale, while depression was indicated by a score of ≥9 points on the HADS-D scale [27].

Statistical analysis

The data were analyzed using the IBM SPSS Statistics software, version 26.0 (IBM, USA). Quantitative parameters were described by reporting the median along with the 25th and 75th percentiles. Anxiety and depression scores in independent groups were compared using the Kruskal-Wallis test (H-test) for three or more groups and the Mann-Whitney test (U-test) for two groups. The Pearson's chi-squared test was used to compare frequencies in independent groups. To evaluate the internal consistency of the HADS and GAD-7 scales, Cronbach's alpha coefficient was calculated (where a value of 1 indicates perfect consistency, >0.9 indicates very good consistency, >0.8 indicates good consistency, >0.7 indicates acceptable consistency, >0.6 indicates questionable consistency, >0.5 indicates poor consistency, and <0.5 indicates insufficient consistency). Differences were considered statistically significant at p <0.05.

[5] Mental and behavioral disorders related to substance use (F10-F19). In Russian. Available from: http://mkb-10.com/index.php?pid=4048

Ethical approval

Written informed consent was obtained from each potential participant for the use of their data for research purposes. After the consultation with a psychiatrist, all participants received the results of the psychometric assessments. The results from the psychiatrist's consultation were kept confidential and were not disclosed to the participants. The study protocol was approved by the local ethics committee of Mental-health clinic No.1 named after N.A. Alexeev, Moscow, Russia (protocol No.1 dated January 25, 2022).

RESULTS

Sample characteristics

The database used in this study to develop a method for assessing the risk of developing a mental disorder included information from 1,097 participants, with 794 (72%) being women. The median age of the respondents was 29 years (interquartile range: 23 to 37 years). At the time of the study, 841 (77%) individuals had higher education, which included 69 participants with an academic degree, 153 (14%) with complete secondary education, and 12 (1%) with incomplete secondary education, and 91 (8%) participants did not provide information regarding their education. The median anxiety score on the GAD-7 scale was 4 points (2; 7), while the median score on the HADS-A anxiety scale was 6 points (3; 9), and on the HADS-D depression scale, it was 4 points (2; 7). Anxiety disorder was identified in 163 (14.86%) participants according to the GAD-7 scale (≥10 points) and in 164 (14.9%) according to the HADS-A scale (≥10 points). At least one of these scales indicated anxiety in 168 (15.3%) participants. Depression, as measured by the HADS-D scale (≥9 points), was found in 152 (13.86%) respondents.

Clinical assessment of anxiety and depression

A random selection of 82 individuals underwent an anonymous consultation with a psychiatrist. The individuals who were not part of this random sample but had also consulted a psychiatrist were comparable to the rest of the study participants in terms of age, sex, and education level (see Table 1).

Based on the psychiatrists' evaluations, among the 82 participants who had undergone consultation, 32 (39%) were deemed mentally healthy. Affective disorders characterized by a predominant depressive syndrome (referred to as "depressive disorders") were identified in 19 participants (23%). Neurotic disorders with a predominance of anxiety symptoms ("anxiety disorders") were found in 18 participants (22%), while other mental disorders were diagnosed in 13 participants (16%) (Figure 1).

Table 1. Characteristics of random sample participants

Parameters	Group not included in the random sample (*n*=1,015)	Random sample (*n*=82)	U	*p*-value
Age, years	29 (23; 37)	27 (22; 31)	30430	0.07
Sex (female), abs. (%)	730 (72%)	64 (78%)	1.24	0.27
Education (higher), abs. (%)	778 (77%)	63 (77%)	3.16	0.08
Academic degree, abs. (%)	62 (6%)	7 (8%)	0.64	0.43
Complete secondary education, abs. (%)	141 (14%)	12 (15%)	0.03	0.86

The proportion of individuals displaying depressive symptoms was consistent between the test results and the psychiatrist's evaluation (χ^2=3.02; p=0.083). Among the 18 patients diagnosed with depression by the psychiatrist, 11 showed corresponding results on the psychometric test, yielding a sensitivity index of 61%. Of the 64 patients who were not diagnosed with depression by the psychiatrist, only 17 produced positive test results (a specificity of 73%). There was a discrepancy between the test results and the psychiatrist's assessment for 24 individuals (29%) (Table 2). The proportion of individuals exhibiting anxiety symptoms differed significantly from the psychiatrist's evaluation (χ^2=8.8; p=0.004), with a sensitivity of 58% and a specificity of 59%. There was a discrepancy between the test results and the psychiatrist's assessment for 34 individuals (41%) (Table 3).

The assessment of internal consistency showed good consistency of the scales, except for the assessment of anxiety in the group of people with other mental disorders (Table 4).

Then, the anxiety and depression scores on the scales in the groups of patients with different clinical diagnoses were compared. No such differences were found for the GAD-7 and HADS-A scales. Statistically significant differences between the groups when comparing them were found for the depression score on the HADS-D scale (Table 5).

DISCUSSION

In a study of a random sample of 1,097 people living in Moscow who responded to an invitation on social media

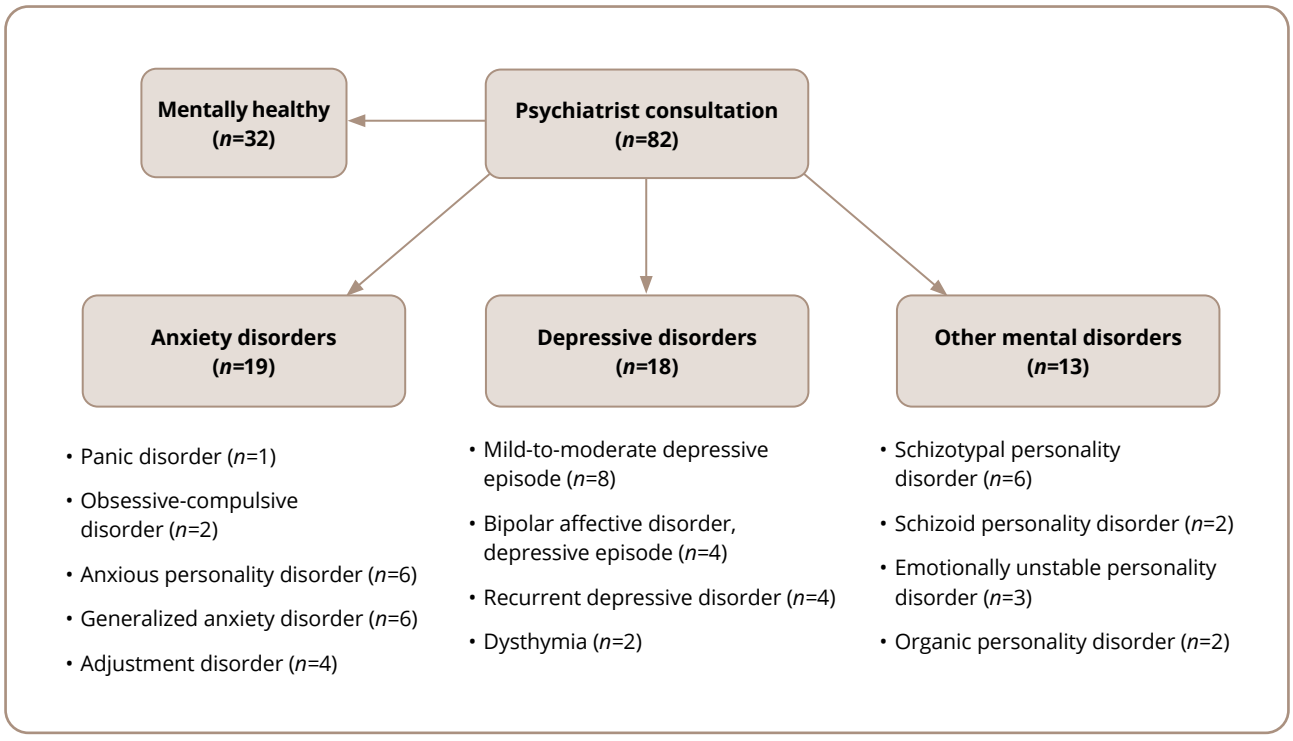

Figure 1. Diagnoses in the sample after clinical assessment.

Source: Savenkova et al., 2024

to participate in a scientific study of mental health, the proportion of people with an anxiety disorder was 14.9%, and this rate was similar for both scales under study (GAD-7 and HADS-A). The proportion of participants showing signs of depression, based on the HADS-D self-assessment, was 13.86%. These rates exceed the global averages, as demonstrated in previous studies conducted in Russia [7]. In comparison, during the COVID-19 pandemic, similar research found that anxiety and depression rates in a comparable sample were 14% and 8%, respectively [28]; thus, the prevalence of anxiety disorders remained steady while the proportion of depressive disorders increased. When comparing the current findings with previous studies conducted on healthcare professionals, the prevalence of depressive disorders was nearly identical (13.79% vs 13.86%). However, anxiety disorders were significantly lower in the general population (14.86%) compared to that in healthcare professionals (39.08%).

Both the GAD-7 and HADS scales, used to assess anxiety and depressive states, are brief, easy-to-complete self-questionnaires. Although the GAD-7 and HADS scales were developed to identify anxiety and depressive disorders in patients with mental or somatic disorder, there are a significant number of publications on their use in

Table 2. Comparison of psychometric testing results and clinical assessment of depressive disorder

Psychometric testing	Clinical (physician) assessment		Total
	Depression (–)	Depression (+)	
Depression (–)	47 (57%)	7 (9%)	54 (66%)
Depression (+)	17 (21%)	11 (13%)	28 (34%)
Total	64 (78%)	18 (22%)	82 (100%)

Note: (–) — absence of depression, (+) — presence of depression; (–)/(+) — for the test results, the presence of a depressive disorder was established with a total score of ≥9 points on the HADS-D scale.

Table 3. Comparison of psychometric testing results and the clinical assessment of anxiety disorder

Psychometric testing	Clinical (physician) assessment		Total
	Anxiety (–)	Anxiety (+)	
Anxiety (–)	37 (45%)	8 (10%)	45 (55%)
Anxiety (+)	26 (32%)	11 (13%)	37 (45%)
Total	63 (77%)	19 (23%)	82 (100%)

Note: (–) — absence of anxiety disorder, (+) — presence of anxiety disorder; (–)/(+) — for the test results, the presence of anxiety disorder was established with a total score of ≥10 points on the GAD-7 scale and/or ≥10 points on the HADS-A scale.

Table 4. Internal consistency (Cronbach's alpha) of the scales in the groups with different medical assessments of mental health

Mental health*	Scales		
	GAD-7	HADS-A	HADS-D
Mentally healthy	0.916	0.850	0.835
Anxiety disorders	0.882	0.733	0.873
Depressive disorders	0.819	0.911	0.868
Other mental disorders	0.676	0.683	0.967

Note: *Based on the results of the clinical assessment. GAD-7 — Generalized Anxiety Disorder 7-item scale; HADS — Hospital Anxiety and Depression Scale.

Table 5. Comparison of anxiety and depression scores on self-administered questionnaires in the groups with different clinical assessments of mental health

Scales	Mental health assessment by a specialist				H	*p*-value
	Mentally healthy (*n*=32)	Anxiety disorders (*n*=18)	Depressive disorders (*n*=19)	Other mental disorders (*n*=13)		
GAD-7 Me [Q1;Q3]	4.5 [3.0; 8.25]	9.0 [4.0; 13.5]	12.5 [6.25; 13.0]	5.0 [2.0; 11.0]	7.60	0.06
HADS-A Me [Q1;Q3]	7.0 [4.75; 9.25]	10.0 [5.0; 12.0]	12.50 [8.5; 15.5]	6.0 [4.0; 12.0]	7.57	0.06
HADS-D Me [Q1;Q3]	4.0 [2.0; 8.0]	6.0 [2.5; 10.5]	11.0 [5.25; 13.0]	6.0 [4.0; 8.0]	8.00	0.05

Note: GAD-7 — Generalized Anxiety Disorder 7-item scale; HADS — Hospital Anxiety and Depression Scale.

the general population. Table S1 in the Supplementary summarizes findings from some of these studies.

Variations in the estimated prevalence of anxiety and depressive disorders across studies can often be attributed to differences in the cutoff values used. In 2023, the Russian-language version of the HADS scale was validated for the Russian population, establishing cutoff values for detecting clinically significant forms of these disorders [16], which we applied in our study.

The participants in our study were predominantly young, with a median age of 29 years. While most research indicates that the risk of anxiety and depressive disorders tends to increase with age [29], recent evidence suggests that these disorders are increasingly affecting younger populations [30, 31].

The use of screening scales can be challenging, because results may be overestimated due to factors such as hypochondriasis, personality traits, and the subjective interpretation of questions by respondents. Sato and Kawahara (2011) found that memory tends to be selective for negative emotional states like anxiety, depression, and helplessness. The authors observed that individuals often overemphasize the significance of past negative experiences, which was evident in the comparison of retrospective assessments with daily ones [32]. These findings are partly supported by results from Howren and Suls, who showed that individuals in an anxious mood reported more concurrent symptoms, while those in a depressed mood recalled more past symptoms [33]. Taple et al. (2019) also discovered that short anxiety and depression questionnaires, such as PROMIS, may be difficult for individuals with low health literacy. People with limited health literacy may respond differently to anxiety and depression questions compared to those with higher health literacy [34]. In 2023, a study with 30 adolescents (aged 15 to 17) who completed the GAD-7 scale every three weeks over a period of year found that individuals with identical GAD-7 scores experienced different dynamics of symptoms [35]. This suggests that symptom patterns are variable and dynamic, and that to gain a full understanding of a patient's clinical presentation, it is important to consider both the progression of symptoms over time and consult specialists to verify the diagnoses.

In our study, 82 participants from the total sample underwent an anonymous psychiatric consultation, which allowed us to divide them into four groups: 39% had

no mental disorders, 23% had affective disorders with predominant depressive symptoms, 22% had neurotic disorders with predominant anxiety symptoms, and 16% had other mental disorders. Notably, the proportion of anxiety disorders diagnosed by psychiatrists was higher than what was indicated by the self-assessment questionnaires.

It is also important to highlight that 13 participants (16%) received psychiatric diagnoses for the first time, falling into the categories of schizophrenia spectrum disorders and personality disorders. In the general population, approximately 8% have personality disorders [36], and around 1% have schizophrenia spectrum disorders [37]. Several factors could explain why such a high percentage of individuals with these diagnoses was identified in our study, especially since the participants had initially denied having any previously diagnosed mental disorders. Stigma surrounding mental health may cause people to feel ashamed or fearful of consulting a psychiatrist [38]. More broadly, lack of information, fear of judgment, and limited access to care are common reasons why people avoid seeking mental health services. However, distress from undiagnosed mental conditions may have motivated these individuals to engage in online testing and subsequently attend an in-person psychiatric consultation in our study.

The evaluation of the internal consistency of the GAD-7 and HADS questionnaire items showed that the respondents did not provide random answers. The lowest level of consistency, which indicated sufficient but not strong reliability, was observed in the anxiety scales (GAD-7 and HADS-A) for individuals diagnosed with personality disorders and schizophrenia spectrum disorders.

However, no significant differences in internal consistency for anxiety and depression assessments across the clinical groups identified by psychiatrists were found. This suggests that the participants provided thoughtful responses, reflecting their actual conditions rather than responding haphazardly. When comparing scale scores, there were significant differences in depression scores for individuals with a clinical diagnosis of depressive disorder, but no significant differences in anxiety scores across the clinical groups. Anxious affect may be a clinical symptom of depressive disorders [39]. When filling out self-assessment questionnaires, patients often report a feeling of anxiety, while depressive symptoms may take a backseat, either due to a lack of subjective complaints or because the clinical features of depression are not fully captured by the screening questions. The clinical differentiation of anxiety and depressive disorders is a challenging task. Anxiety may be seen by clinicians as a feature of depression rather than a standalone disorder. In addition, the two conditions may also coexist as comorbidities [40]. The diagnosis may depend on the psychiatrist's experience and training, influencing whether they interpret the patient's symptoms as an independent anxiety disorder or as depression with an anxious affect [41]. Additionally, the use of ICD-10 criteria is known to be associated with a lower reliability in diagnosing anxiety disorders [42].

A limitation of this study is the biased sample. The study involved residents of a large metropolitan area, with a sample characterized by a high proportion of women, individuals with higher education, and those with mental disorders, as identified by the psychiatrists who consulted the participants. People who are interested in their mental health and take part in such studies are more likely to either have or suspect they have a mental disorder. However, it is very difficult to overcome this limitation and many studies relying on volunteers for participation face similar biases. Furthermore, in different regions of Russia, various economic, socio-demographic, and environmental factors may take precedence in influencing mental health, which may result in different findings [43, 44]. In large cities like Moscow, however, anxiety and depressive disorders are particularly prevalent. The limitations of online testing, as noted in previous research, also apply to this study [28].

CONCLUSION

The anxiety and depression levels among a random sample of Moscow residents who participated in an online mental health study were found to exceed global averages, reaching approximately 14%.

The proportion of individuals with depressive symptoms, as measured by scales, was similar to the clinical evaluations conducted by psychiatrists, while the assessments of anxiety symptoms were overestimated based on the test results.

Early diagnosis of anxiety and depressive disorders is a critical issue, and while self-administered screening scales can help address the problem, their reliability remains limited.

Future research should concentrate on the development of integrated approaches that combine the ease and accessibility of psychometric tools with the precision of clinical interviews.

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Supplementary data

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