ANXIETY SEVERITY AND PERSONALITY FUNCTIONING IN AMBULATORY PSYCHIATRIC PATIENTS

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Abstract: High levels of anxiety can increase individuals risk for developing anxiety disorder throughout their lifetime. Personality dysfunction is always present in anxiety and mixed anxiety-depressive disorders, only severe function impairment meet the criteria for personality disorders. Distress and dysfunction are maladaptive reactions where parenting styles, family environment, socioeconomic status and thinking errors may work together to shape an individual response to stress.
In the Center for Mental Health "Vlae"- Psychiatric Hospital "Skopje" from September to November 2025, 37 outpatients were diagnosed with Anxiety and Mixed Anxiety with Depressive disorders. The measurement instruments used to assess the levels of anxiety was the Hamilton Anxiety Rating Scale (HAM-A) and for the individual functioning was used The Level of Personality Functioning Scale – Brief Form 2.0 (LPFS-BF-2.0). Informed consent was obtained from participants.
All patients demonstrated high HAM-A scores, indicating severe anxiety across the outpatient sample. LPFS-BF scores show predominantly mild to moderate personality dysfunction, with a smaller subgroup exhibiting severe impairment which indicated personality disorder and necessity of subsequent adequate treatment pharmacological and evidence based psychotherapeutically treatments.
Keywords: anxiety, mixed anxiety-depressive disorder, functioning impairment and treatment.

1. INTRODUCTION

Neuroticism is one of the negative emotional personality traits and is highly associated with anxiety disorders (1). The connection between personality and mental health issues can be detected using the 12-item version of the General Health Questionnaire (GHQ-12). Neuroticism has a positive association with the occurrence of a wide range of psychiatric disorders (3). Anxiety, as a key symptom of anxiety disorders, has an impact on cognitive processes, affects social interactions, and influences personal functioning. High levels of anxiety result in a lower quality of life, a decline in individual well-being and satisfaction, and have an impact on society as a whole.
Anxiety is an individually determined, subjective feeling. Since the underlying reason is unknown, the main cause of anxiety is often irrational and cannot be explained by rational criteria. The distinctive criteria between normal and pathological anxiety are whether it serves adaptive or maladaptive reactions and needs (2). Distress and dysfunction are maladaptive reactions resulting in high levels of anxiety, in which parenting styles, family environment, socioeconomic status, and thinking errors may work together to shape an individual's response to stress. Although the Mixed Anxiety and Depressive Disorder (MADD) diagnosis is comprised of anxiety and depressive symptoms almost equally, predominant anxiety has a serious impact on a personal life of an individual (4). On a biological basis, there is estimated higher activity of the hypothalamic-pituitary-adrenal axis in patients with MADD (5). Advanced neuroimaging methods can help more precisely quantify dysfunction among anxiety and depressive patients (15). The establishment of precise classifying standards for biotype circuits would help in a standardized diagnostic approach and result in better therapeutic outcomes (16).

2. PERSONALITY FUNCTIONING

Although the prevalence of personality disorders varies between 0.5% and 2.5% in the general population, it increases drastically in a psychiatric populations, reaching almost one half of all patients with pathological personality (10). Their high prevalence, associations with insufficient job performance, problematic interpersonal functioning, suicidal behavior, especially when combined with other mental disorders, make the detection of personality disorders and intervention a priority in mental healthcare services.
The severity of personality disorder is defined by two main criteria. The first is the level of self–functioning which includes self-concept, self-evaluation, and identity; the second is quality and maintenance in interpersonal relationships. Severity of personality disorder can be assessed as mild, moderate, and severe, including trait domains that refer to specific domains such as negative emotionality, emotional withdrawal, antisocial tendencies, impulsivity and anankastia (14). Clear distinction between certain diagnostic categories for personality disorders remains unresolved in clinical practice.

A short self-report questionnaire, the Level of Personality Functioning Scale – Brief Form 2.0 (LPFS-BF-2.0), is used to assess intrapersonal and interpersonal functioning, indicating symptoms of mental disorders, and can be a useful tool for detection and planning for suitable treatment options (6). A high frequency of personality disorders has been found in individuals with neurotic and/or depressive disorders with positive correlation between anxiety and depression and intensity of personality disorder (9).The presence of anxiety disorders is highly associated with personality disorder, especially personality borderline disorder resulting in comorbidity, where women are more affected. Dual diagnosis conditions are associated with serious psychopathology and suicidal behavior, which eventually leads to poor prognosis. Better scientific solutions and holistic approaches are expected in the future (7, 8).

3. ANXIETY SEVERITY AND PERSONALITY FUNCTIONING IN AMBULATORY PSYCHIATRIC PATIENTS

Statistical Analysis

Statistical analyses were conducted using standard parametric and non-parametric procedures appropriate for small to moderate sample sizes and continuous clinical outcomes. All analyses were two-tailed, and statistical significance was set at $\mathbf{p < 0.05}$.

Data preparation and coding

Sociodemographic variables were coded according to predefined categories: gender (male/female), marital status (single/married), and education level (primary, secondary, higher). Age was treated as a continuous variable. Anxiety severity was assessed using the **Hamilton Anxiety Rating Scale (HAM-A)** total score (13), while personality functioning was evaluated using the **Level of Personality Functioning Scale – Brief Form (LPFS-BF 2.0)** total score. Higher scores on both scales indicate greater severity or impairment (12,13).

Descriptive statistics

Continuous variables were summarized using **means and standard deviations (SD)**, as well as medians and ranges where appropriate. Categorical variables were described using **frequencies and percentages**. Distributional characteristics were examined visually and analytically to guide the choice of inferential tests.

Group comparisons

Comparisons of HAM-A and LPFS-BF total scores across demographic groups were performed using:

- **Independent-samples t-tests** for dichotomous variables (e.g., gender, marital status), when assumptions of approximate normality were met;
- **Kruskal–Wallis tests** for variables with more than two categories (e.g., education level, place of residence), due to unequal group sizes and potential deviations from normality.

Where overall tests indicated statistical significance, post-hoc pairwise comparisons were considered with appropriate correction for multiple testing. Effect sizes were reported to complement p-values and to facilitate clinical interpretation.

Correlation analysis

Associations between age, anxiety severity (HAM-A), and personality functioning (LPFS-BF) were examined using **Spearman's rank correlation coefficient (ρ)**. This non-parametric approach was selected to account for potential non-normal distributions and ordinal properties of scale scores. Correlation strength was interpreted as weak ($|\rho| < 0.30$), moderate (0.30–0.49), or strong (≥ 0.50).

Regression analysis

To identify demographic predictors of anxiety severity, a **multiple linear regression model** was constructed with **HAM-A total score as the dependent variable**. Independent variables included:

- Age (continuous),
- Gender (female vs male),
- Marital status (married vs single),
- Education level (ordinal).

Categorical predictors were dummy-coded prior to inclusion in the model. Regression coefficients (β) were estimated using ordinary least squares. Given the limited sample size, the number of predictors was deliberately restricted to minimize overfitting. Regression results were interpreted primarily in terms of direction and magnitude of effects rather than statistical significance alone.

Statistical considerations

Due to small subgroup sizes for certain demographic categories, some analyses were interpreted cautiously, and ethnicity and place of residence were not included in multivariable models. Missing data were minimal and handled

using complete-case analysis. All statistical procedures were chosen to balance methodological rigor with the exploratory nature of outpatient psychiatric research.

4. RESULTS

Sample characteristics

The study included 37 ambulatory psychiatric patients. The mean age of participants was 43.8 ± 11.1 years. Females constituted the majority of the sample. Most participants were married and had secondary or primary education. This demographic profile reflects a typical outpatient psychiatric population.

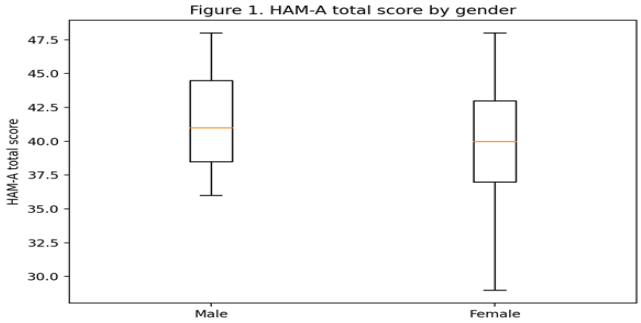
Table 1. Descriptive statistics for clinical scales

Scale	Mean	± SD	Minimum	Maximum
HAS_SUM	40.14	± 4.94	29	48
LPFS_SUM	28.19	± 5.85	19	41

Source: LPFS-BF-2.0-Level of Personality Functioning Scale- Brief Form, Hamilton Anxiety Rating Scale (HAM-A)

Table 1 interpretation: All patients demonstrated high HAM-A scores, indicating severe anxiety across the outpatient sample. LPFS-BF scores show predominantly mild to moderate personality dysfunction, with a smaller subgroup exhibiting severe impairment.

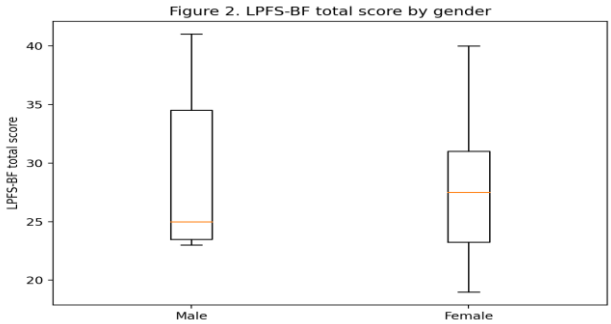
Figure 1.HAM-A total score by gender



Source: Hamilton Anxiety Rating Scale (HAM-A)

Figure 1 interpretation:.Anxiety severity was high in both genders. Although females showed slightly higher median HAM-A scores, the overlap between groups suggests no clinically meaningful gender difference.

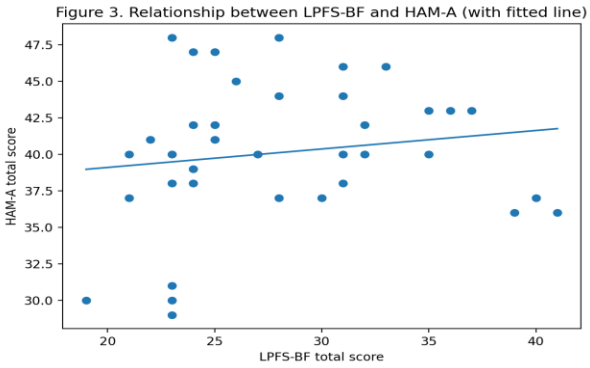
Figure 2.LPFS-BF total score by gender



Source: LPFS-BF-2.0-Level of Personality Functioning Scale- Brief Form (LPFS-BF-2.0)

Figure 2 interpretation: LPFS-BF scores were comparable between males and females, indicating similar levels of personality functioning impairment regardless of gender.

Figure 3: Relationship between LPFS-BF and HAM-A (with fitted line)



Source: LPFS-BF-2.0-Level of Personality Functioning Scale- Brief Form, Hamilton Anxiety Rating Scale (HAM-A)

Figure 3 interpretation: The scatterplot demonstrates a weak positive relationship between anxiety severity and personality dysfunction. This suggests that while related, these constructs represent partially independent dimensions.

Regression analysis

A multiple linear regression analysis was conducted with HAM-A total score as the dependent variable and age, gender, marital status, and education level as independent predictors.

Table 1. Multiple linear regression predicting HAM-A total score

Predictor	β coefficient	Interpretation
Age	-0.02	Negative association with anxiety severity
Female	-2.88	Negative association with anxiety severity
Married	2.41	Positive association with anxiety severity
Education_level	-3.34	Negative association with anxiety severity
Intercept	46.78	Positive association with anxiety severity

Source: Hamilton Anxiety Rating Scale (HAM-A)

Interpretation: Age and gender showed small positive associations with anxiety severity, suggesting a tendency toward higher anxiety in older and female patients. Marital status and education demonstrated weaker effects. Overall, demographic variables explained only a limited proportion of variance, highlighting the clinical heterogeneity of anxiety severity in ambulatory psychiatric patients.

Table 2. Correlations between age, anxiety severity, and personality functioning

Variables	Spearman ρ	p-value	Interpretation
HAM-A vs LPFS-BF	0.18	0.296	Weak association
Age vs HAM-A	0.28	0.096	Weak association
Age vs LPFS-BF	-0.19	0.250	Weak association

Source: LPFS-BF-2.0-Level of Personality Functioning Scale- Brief Form, Hamilton Anxiety Rating Scale (HAM-A)

Interpretation: Correlations between anxiety severity, personality functioning, and age were weak and statistically non-significant, suggesting that anxiety intensity and personality impairment represent related but largely independent clinical dimensions in ambulatory psychiatric patients.

Table 3. Distribution of HAM-A severity categories

Severity category	HAM-A range	n	%
Severe anxiety	≥25	37	100.0

Source: Hamilton Anxiety Rating Scale (HAM-A)

Interpretation: All patients met criteria for severe anxiety. This finding underscores the high clinical burden of anxiety symptoms among patients treated in ambulatory psychiatric settings.

Table 4. Distribution of LPFS-BF personality functioning levels

Functioning level	Score range	n	%	Clinical meaning
Healthy	<26	17	45.9	No clinically relevant dysfunction
Mild impairment	26–31	6	16.2	Clinically relevant personality dysfunction
Moderate impairment	31–36	9	24.3	Clinically relevant personality dysfunction
Severe impairment	36–40	4	10.8	Clinically relevant personality dysfunction
Extreme impairment	>40	1	2.7	Clinically relevant personality dysfunction

Source: LPFS-BF-2.0-Level of Personality Functioning Scale- Brief Form (LPFS-BF-2.0)

5. CONCLUSION

Although anxiety severity was uniformly high, most patients exhibited only mild to moderate personality dysfunction. This supports the notion that severe anxiety can occur independently of severe personality pathology in ambulatory psychiatric populations. Also, the percentage of severe personality dysfunction is significant and should be considered for further assessment toward personality disorder with personalized approach combined with comprehensive, evidence-based treatments.

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