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CLINICAL AND PSYCHOPATHOLOGICAL CHARACTERISTICS OF PATIENTS WITH ANXIETY AND DEPRESSIVE DISORDERS LIVING WITH HIV

ABSTRACT

Introduction. Mental disorders and clinically significant anxiety and depressive manifestations remain an important component of healthcare for people living with HIV, even in the era of effective antiretroviral therapy. Their heterogeneous clinical presentation, including affective, anxiety, asthenic, somatic, and cognitive manifestations, complicates clinical assessment and may require characterization of the predominant psychopathological pattern in addition to categorical psychiatric diagnosis. The aim of the study was to characterize the clinical and psychopathological features of people living with HIV according to the predominant clinical-psychopathological profile and to assess the associations of these profiles with HIV clinical stage and the severity of depressive, anxiety, and general psychopathological symptoms.

Methods. A single-center cross-sectional analytical study included 132 adults with confirmed HIV infection receiving antiretroviral therapy for at least six months. Clinical-psychopathological assessment identified three predominant profiles: anxiety (39.4%), depressive (24.2%), and asthenic-cognitive (36.4%). Clinical-anamnestic, clinical-psychopathological, psychodiagnostic, and statistical methods were used. Psychodiagnostic assessment included the Beck Depression Inventory, State-Trait Anxiety Inventory, and Symptom Checklist-90-Revised. Quantitative variables were compared using non-parametric tests, and associations between categorical variables were assessed using Pearson's chi-square test or Fisher's exact test, as appropriate.

Results. The three clinical-psychopathological profiles differed in their predominant clinical manifestations and psychometric characteristics. The anxiety profile was characterized primarily by persistent internal tension, illness-related fears, anxious fixation on bodily sensations, concentration difficulties, and sleep disturbances. The depressive profile showed prominent depressed mood, loss of interest, hopelessness, guilt-related

experiences, and reduced working capacity. The asthenic-cognitive profile was characterized predominantly by persistent fatigue, reduced working capacity, and concentration difficulties, accompanied by substantially lower affective and general psychopathological scores. The depressive profile showed the highest observed levels of depressive symptoms, general psychopathological distress, and hostility, whereas state anxiety was highest in the anxiety profile (global between-profile comparisons, $p<0.001$). Quantitative severity of depressive, anxiety, and general psychopathological symptoms did not differ significantly between participants with early (I–II) and advanced (III–IV) HIV stages. In contrast, the distribution of clinical-psychopathological profiles was significantly associated with HIV stage ($\chi^2=13.64$; df=2; $p=0.001$), with the anxiety profile more frequently represented in stages I–II and the depressive profile in stages III–IV.

Discussion. The findings demonstrate clinically meaningful heterogeneity of psychopathological manifestations among people living with HIV. Anxiety, depressive, and asthenic-cognitive profiles differed in both clinical manifestations and psychometric characteristics, while HIV clinical stage was associated with profile distribution rather than with a simple quantitative increase in affective or general psychopathological symptom severity. These findings support the clinical relevance of syndrome-oriented assessment as a complementary approach to characterizing mental health manifestations in people living with HIV.

Keywords: HIV, anxiety, depression, psychopathology, clinical-psychopathological profile, mental health.

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КЛІНІКО-ПСИХОПАТОЛОГІЧНІ ОСОБЛИВОСТІ ПАЦІЄНТІВ ІЗ ТРИВОЖНИМИ ТА ДЕПРЕСИВНИМИ РОЗЛАДАМИ, ЯКІ ЖИВУТЬ З ВІЛ

Вступ. Психічні розлади та клінічно значущі тривожні й депресивні прояви залишаються важливою складовою медичної допомоги людям, які живуть з ВІЛ, навіть в умовах ефективної антиретровірусної терапії. Неоднорідність їхньої клінічної картини, що може включати афективні, тривожні, астенічні, соматичні та когнітивні прояви, ускладнює клінічну оцінку та зумовлює доцільність визначення провідного психопатологічного патерну поряд із категоріальною психіатричною діагностикою. Мета дослідження: охарактеризувати клініко-психопатологічні особливості людей, які живуть з ВІЛ, залежно від провідного клініко-психопатологічного профілю та оцінити зв'язки цих профілів із клінічною стадією ВІЛ-інфекції й вираженістю депресивної, тривожної та загальної психопатологічної симптоматики.

Методи. До одноцентрового одномоментного аналітичного дослідження включено 132 дорослих пацієнтів із підтвердженою ВІЛ-інфекцією, які отримували антиретровірусну терапію щонайменше протягом шести місяців. За результатами клініко-психопатологічного обстеження визначено три провідні профілі: тривожний (39,4%), депресивний (24,2%) та астено-когнітивний (36,4%). У дослідженні застосовували клініко-анамнестичний,

клініко-психопатологічний, психодіагностичний та статистичний методи. Психодіагностичне обстеження включало опитувальник депресії Бека, шкалу ситуативної та особистісної тривожності Спілбергера та Symptom Checklist-90-Revised. Для порівняння кількісних показників застосовували непараметричні критерії, а зв'язки між категоріальними змінними оцінювали за критерієм χ^2 Пірсона або точним критерієм Фішера залежно від очікуваних частот.

Результати. Три клініко-психопатологічні профілі відрізнялися за структурою провідних клінічних проявів і психометричними характеристиками. Для тривожного профілю були найбільш характерними стійке внутрішнє напруження, пов'язані із захворюванням побоювання, тривожна фіксація на тілесних відчуттях, труднощі концентрації уваги та порушення сну. Депресивний профіль характеризувався вираженим зниженням настрою, втратою інтересу та задоволення, почуттям безнадії й провини, а також зниженням працездатності. В астено-когнітивному профілі переважали стійка втомлюваність, зниження працездатності та труднощі концентрації уваги на тлі суттєво нижчої вираженості афективної та загальної психопатологічної симптоматики. У депресивному профілі спостерігали найвищі рівні депресивної симптоматики, загального психопатологічного дистресу та ворожості, тоді як найвищий рівень ситуативної тривожності спостерігався у тривожному профілі (глобальні міжпрофільні відмінності, $p<0,001$). Кількісна вираженість депресивної, тривожної та загальної психопатологічної симптоматики статистично значуще не відрізнялася між учасниками з ранніми (I–II) та пізніми (III–IV) стадіями ВІЛ-інфекції. Водночас розподіл клініко-психопатологічних профілів був статистично значуще пов'язаний зі стадією ВІЛ-інфекції ($\chi^2=13,64$; $df=2$; $p=0,001$): тривожний профіль частіше був представлений при I–II стадіях, а депресивний – при III–IV стадіях.

Обговорення. Отримані результати свідчать про клінічно значущу неоднорідність психопатологічних проявів у людей, які живуть з ВІЛ. Тривожний, депресивний та астено-когнітивний профілі відрізнялися як структурою клінічних проявів, так і психометричними характеристиками, тоді як клінічна стадія ВІЛ-інфекції була пов'язана з розподілом профілів, а не з простим кількісним зростанням вираженості афективної або загальної психопатологічної симптоматики. Отримані дані підтверджують клінічну доцільність синдромально орієнтованої оцінки як додаткового підходу до характеристики психічного стану людей, які живуть з ВІЛ.

Ключові слова: ВІЛ, тривога, депресія, психопатологія, клініко-психопатологічний профіль, психічне здоров'я.

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ABBREVIATIONS

ART – antiretroviral therapy
BDI – Beck Depression Inventory
GSI – Global Severity Index
HIV – human immunodeficiency virus
PLWH – people living with HIV
SCL-90-R – Symptom Checklist-90-Revised
STAI – State-Trait Anxiety Inventory

INTRODUCTION

The widespread use of effective antiretroviral therapy (ART) has substantially improved survival and transformed HIV infection into a manageable chronic condition. Consequently, contemporary HIV care increasingly focuses not only on virological suppression and immune status but also on mental health, quality of life, psychosocial functioning, and long-term engagement in care. Current World Health Organization guidance supports the integration of mental health assessment and management, including care for depression and anxiety, into routine HIV service delivery [1].

Mental health problems remain highly prevalent among people living with HIV. A recent systematic review and meta-analysis of 240 studies estimated pooled prevalences of 31% for depressive symptoms, 29% for anxiety symptoms, and 44% for psychological distress [2]. However, prevalence estimates depend substantially on the assessment method. A meta-analysis focusing specifically on diagnostically defined anxiety disorders reported a pooled prevalence of approximately 15.5% [3], while a recent systematic review of ICD/DSM-diagnosed depressive disorders similarly demonstrated a substantial but more narrowly defined burden of categorical depressive disorders among PLWH [4]. These differences underscore the importance of distinguishing between dimensional psychopathological manifestations and categorical psychiatric disorders when evaluating mental health in PLWH.

The psychopathological presentation of PLWH is clinically heterogeneous and may include anxiety and depressive manifestations together with fatigue, sleep disturbances, irritability, apathy, somatic symptoms, subjective cognitive difficulties, and reduced functional capacity. This heterogeneity reflects the potential interaction of biological, psychological, and social factors. Neuroinflammatory and immune-related mechanisms have been considered potential biological contributors to affective manifestations [5], whereas HIV-related stress and stigma may contribute to psychological distress and are associated with depressive and anxiety symptoms [6,7]. Consequently, affective manifestations in PLWH should not be considered exclusively as either psychological reactions to HIV infection or direct consequences of its biological effects.

Clinical differentiation may be further complicated by the overlap between affective, asthenic, motivational, and cognitive manifestations. Fatigue, impaired concentration, subjective memory difficulties, reduced motivation, and apathy may occur within different clinical presentations. At the same time, cognitive complaints in PLWH require careful differential assessment because HIV-associated neurocognitive impairment represents a distinct diagnostic field and cannot be inferred from subjective cognitive symptoms alone [8, 9].

This clinical overlap creates an important diagnostic challenge. Categorical psychiatric diagnosis remains essential; however, it may not fully characterize the predominant organization of psychopathological manifestations at a particular point in time. Syndrome-oriented clinical assessment may therefore provide complementary information by identifying whether anxiety, depressive, or asthenic-cognitive manifestations predominate. Such clinical-psychopathological profiles should not be regarded as independent diagnostic categories but rather as a complementary approach to describing clinically meaningful heterogeneity among PLWH.

The Ukrainian context provides an additional reason for detailed mental health assessment. A substantial part of the study period coincided with the full-scale war, during which Ukrainian civilian populations have demonstrated clinically relevant symptoms of anxiety, depression, post-traumatic stress, and sleep disturbance [10]. The war has also disrupted HIV-related healthcare services in affected regions and created additional stress for both patients and healthcare professionals [11]. However, because individual exposure to war-related stress was not quantified and recruitment began before February 2022, these factors are considered contextual in the present study and are not used to explain the observed psychopathological profiles directly.

Contemporary HIV care therefore requires attention to emotional, psychological, and cognitive well-being in addition to virological and immunological outcomes [1,12]. Despite increasing recognition of these needs, the relationship between predominant clinical-psychopathological patterns, their clinical and psychometric characteristics, and HIV clinical stage remains insufficiently characterized. Examining these relationships may provide a more differentiated description of psychopathological manifestations in PLWH and complement categorical psychiatric diagnosis and standardized psychometric assessment.

Objective. The aim of the study was to characterize the clinical and psychopathological features of PLWH according to the predominant clinical-psychopathological profile and to assess the associations of these profiles with HIV clinical stage and the severity of depressive, anxiety, and general psychopathological symptoms.

MATERIALS AND METHODS

Study design and participants

A single-center cross-sectional analytical study was conducted as part of a broader clinical investigation of

mental health in people living with HIV. The present analysis included data obtained during the main clinical and psychopathological stage of the study conducted between 2021 and 2025 at the Municipal Non-Profit Enterprise of the Sumy Regional Council "Regional Clinical Medical Center for Socially Dangerous Diseases", Sumy, Ukraine.

The study included 132 adults with confirmed HIV infection who were receiving ART. Participants ranged in age from 22 to 75 years; the mean age was 42.6±11.3 years. Men comprised 58.3% and women 41.7% of the study sample.

According to the clinical stage of HIV infection, 36.4% of participants had stage I disease, 13.6% stage II, 22.7% stage III, and 27.3% stage IV. For selected analyses, HIV stages were grouped into early (I–II) and advanced (III–IV) stages, each comprising 50.0% of the study sample.

The inclusion criteria were age ≥18 years, confirmed HIV infection, receipt of ART for at least six months, ability to participate in clinical-psychopathological and psychometric assessment, and provision of voluntary informed consent.

Exclusion criteria were an acute psychotic state; severe cognitive impairment or a severe somatic condition preventing meaningful participation and completion of psychometric assessment; refusal to participate; and insufficient clinical or anamnestic data for valid analysis.

Clinical and psychodiagnostic assessment

The study included clinical-anamnestic, clinical-psychopathological, and psychodiagnostic methods. Clinical-anamnestic assessment and review of medical records were used to obtain sociodemographic and clinical data, including age, sex, HIV clinical stage, CD4+ T-cell count, HIV viral load, duration of HIV infection, duration and regimen of ART, and relevant sociodemographic and clinical characteristics.

Separate detailed analyses of suicidal risk and ART adherence in this cohort have been reported previously [13,14] and were not considered primary outcomes of the present study.

Clinical-psychopathological assessment was used to characterize the participants' current mental state, identify predominant psychopathological symptoms and syndromes, and establish psychiatric diagnoses according to ICD-10 criteria where applicable [15]. The assessment included affective, anxiety, asthenic, somatic, cognitive, emotionally labile, apathetic, hostile, and related psychopathological manifestations.

For the purposes of the present analysis, participants were classified according to the predominant syndrome characterizing their current mental state into anxiety (39.4%), depressive (24.2%), and asthenic-cognitive (36.4%) clinical-psychopathological profiles. This syndrome-based stratification was used as a complementary clinical approach and was not considered equivalent to formal psychiatric diagnosis.

Psychodiagnostic assessment included the 21-item Beck Depression Inventory (BDI) [16], State-Trait Anxiety Inventory (STAI) [17], and Symptom Checklist-90-Revised (SCL-90-R) [18–20], providing standardized measures of depressive symptoms, state and trait anxiety, hostility, and general psychopathological distress.

Statistical Analysis. Statistical analyses were performed using R version 4.4.1 and RStudio 2025.09.1 [21, 22]. Quantitative variables were summarized as mean±standard deviation and, where appropriate, as median [Q1–Q3]. Categorical variables were presented as percentages. Normality of distributions was assessed using the Shapiro–Wilk test. Because several quantitative variables showed non-normal distributions, non-parametric methods were used for between-group comparisons.

Comparisons of quantitative variables among the three independent clinical-psychopathological profiles were performed using the Kruskal–Wallis test. Comparisons between two independent groups were performed using the Mann–Whitney U test. Categorical variables were compared using Pearson's chi-square test or Fisher's exact test, as appropriate. The association between clinical-psychopathological profile and HIV clinical stage was assessed using Pearson's chi-square test. All statistical tests were two-sided, and $p<0.05$ was considered statistically significant.

RESULTS

Clinical manifestations

Clinical-psychopathological assessment identified three predominant patterns of psychopathological manifestations: an anxiety profile (39.4%), a depressive profile (24.2%), and an asthenic-cognitive profile (36.4%).

These profiles reflected the predominant syndromic organization of the participants' current mental state and were used to characterize differences in clinical manifestations and psychometric features.

Clinical manifestations

Distinct patterns of clinical manifestations were observed across the three clinical-psychopathological profiles. The anxiety profile was characterized predominantly by persistent internal tension, illness-related fears, anxious fixation on bodily sensations, difficulties concentrating, sleep disturbances, and reduced working capacity. The depressive profile was characterized by depressed mood, loss of interest or pleasure, hopelessness, guilt-related experiences, reduced working capacity, fatigue, and sleep

disturbances. The asthenic-cognitive profile was characterized mainly by persistent fatigue, reduced working capacity, and concentration difficulties, with a comparatively low frequency of core depressive manifestations. Overall, affective and anxiety-related manifestations predominated in the anxiety and depressive profiles, whereas functional exhaustion and concentration difficulties were particularly prominent in the asthenic-cognitive profile (Table 1).

Table 1. Selected clinical manifestations according to the predominant clinical-psychopathological profile

Clinical manifestation	Anxiety profile,	Depressive profile,	Asthenic-cognitive profile,
Depressed mood	48.1	96.9	25.0
Loss of interest or pleasure	32.7	93.8	4.2
Guilt-related experiences	28.8	87.5	6.3
Hopelessness	82.7	96.9	8.3
Persistent internal tension/anxiety	100.0	31.3	14.6
Fear of HIV progression	84.6	37.5	12.5
Anxious fixation on bodily sensations	71.2	15.6	2.1
Reduced working capacity	92.3	96.9	100.0
Rapid fatigue	90.4	93.8	100.0
Difficulties concentrating	86.5	50.0	79.2
Sleep disturbances	80.8	90.6	25.0

Note. Data are presented as percentages within each clinical-psychopathological profile

Psychometric characteristics

Psychometric characteristics differed significantly across the three clinical-psychopathological profiles. The depressive profile showed the highest observed levels of depressive symptoms and general psychopathological distress, whereas state anxiety was highest in the anxiety profile. Trait anxiety scores were numerically higher in both affective profiles than in the asthenic-cognitive profile. SCL-90-R measures of depression, anxiety, hostility, and overall psychopathological distress showed global between-profile differences. The asthenic-cognitive profile was characterized by substantially lower affective and general psychopathological scores despite prominent fatigue, reduced working capacity, and concentration difficulties (global between-profile comparisons, $p<0.001$; Table 2).

Table 2. Psychometric characteristics according to the predominant clinical-psychopathological profile

Measure	Anxiety profile, n=52	Depressive profile, n=32	Asthenic-cognitive profile, n=48	p
BDI, points	12.13±6.85; 10 [7–18]	19.03±9.30; 17.5 [12–26]	5.40±4.29; 4 [3–6]	<0.001
STAI-S, points	46.50±11.97; 46 [38–55]	42.19±10.38; 44.5 [30–47.5]	32.06±11.02; 29 [24–35]	<0.001
STAI-T, points	45.38±10.82; 47 [43–54]	46.91±7.09; 47 [45–49]	32.81±10.01; 30 [24.75–40]	<0.001
SCL-90-R DEP	0.78±0.47; 0.77 [0.38–1.00]	1.16±0.56; 1.08 [0.69–1.53]	0.31±0.27; 0.23 [0.15–0.33]	<0.001
SCL-90-R ANX	0.96±0.61; 0.80 [0.60–1.30]	1.02±0.60; 1.10 [0.48–1.30]	0.32±0.41; 0.20 [0.10–0.30]	<0.001
SCL-90-R GSI	0.73±0.28; 0.71 [0.62–0.88]	1.05±0.46; 1.04 [0.61–1.34]	0.30±0.26; 0.24 [0.14–0.32]	<0.001
SCL-90-R Hostility	0.66±0.40	1.04±0.55	0.36±0.44	<0.001

Note. Data are presented as mean±standard deviation and median [Q1–Q3], where available. BDI – Beck Depression Inventory; STAI-S – State Anxiety subscale; STAI-T – Trait Anxiety subscale; DEP – depression; ANX – anxiety; GSI – Global Severity Index. Global between-profile comparisons were performed using the Kruskal–Wallis test

Relationship with HIV clinical stage

When participants were divided into early (I–II) and advanced (III–IV) HIV stages, which represented equal proportions of the study sample, no statistically significant differences were found in the quantitative severity of the main affective or general psychopathological measures. Mean BDI scores were 10.91±7.61 points in the early-stage group and 11.80±9.42 points in the advanced-stage group ($p=0.985$). Corresponding STAI-S scores were

42.41±13.58 and 38.00±11.83 (p=0.062), while STAI-T scores were 41.56±12.07 and 40.80±11.14 (p=0.549). No statistically significant differences were observed for SCL-90-R depression (p=0.582), anxiety (p=0.703), or GSI (p=0.861). Thus, none of the analyzed quantitative measures demonstrated a statistically significant increase in symptom severity in participants with advanced HIV stages.

In contrast, the distribution of predominant clinical-psychopathological profiles was significantly associated with HIV clinical stage (Pearson χ^2=13.64; df=2; p=0.001). Among participants with early HIV stages (I–II), the anxiety profile accounted for 48.5%, the asthenic-cognitive profile for 40.9%, and the depressive profile for 10.6%. Among participants with advanced HIV stages (III–IV), the depressive profile accounted for 37.9%, the asthenic-cognitive profile for 31.8%, and the anxiety profile for 30.3% (Table 3).

Table 3. Distribution of clinical-psychopathological profiles according to HIV clinical stage

Clinical-psychopathological profile	**HIV stages I–II, n=66**	**HIV stages III–IV, n=66**
Anxiety profile	48.5%	30.3%
Depressive profile	10.6%	37.9%
Asthenic-cognitive profile	40.9%	31.8%
Total	100.0%	100.0%

Note. Data are presented as percentages within each HIV-stage group. Pearson χ^2=13.64; df=2; p=0.001

DISCUSSION

The present study demonstrated substantial clinical heterogeneity of psychopathological manifestations among people living with HIV. Three predominant clinical-psychopathological profiles–anxiety, depressive, and asthenic-cognitive–differed in both the structure of clinical manifestations and psychometric characteristics. Importantly, these profiles were considered syndrome-based characteristics of the participants' current mental state rather than independent diagnostic categories. This approach allowed the clinical presentation to be characterized beyond categorical psychiatric diagnosis and provided a more differentiated description of the predominant psychopathological manifestations.

The anxiety profile was characterized by a coherent combination of persistent internal tension, illness-related fears, anxious fixation on bodily sensations, concentration difficulties, and sleep disturbances. Persistent internal tension was particularly characteristic of this profile, while fear of HIV progression and heightened attention to bodily sensations were also prominent. These clinical manifestations were accompanied by the highest level of state anxiety. Thus, the clinical-psychopathological and psychometric findings converged in identifying anxiety as the predominant dimension of the current mental state in this profile.

At the same time, the anxiety profile was not limited to anxiety-specific manifestations. Reduced working capacity, rapid fatigue, concentration difficulties, and sleep disturbances were also frequently observed. Their coexistence with internal tension and illness-related fears illustrates the multidimensional nature of the clinical presentation and emphasizes the importance of assessing the overall structure of psychopathological manifestations rather than interpreting individual symptoms in isolation.

The depressive profile demonstrated the greatest overall affective and psychopathological burden. Clinically, it was characterized by depressed mood, loss of interest, hopelessness, guilt-related experiences, reduced working capacity, fatigue, and sleep disturbances. This clinical pattern corresponded to the psychometric findings, with the depressive profile demonstrating the highest observed levels of depressive symptoms and general psychopathological distress. The correspondence between clinical manifestations and standardized measures supports the distinction of a predominantly depressive pattern within the studied cohort.

Another notable characteristic of the depressive profile was the highest observed hostility score. In the context of the present findings, hostility should not be interpreted as a separate diagnostic phenomenon but rather as a dimensional component of the broader psychopathological presentation. Irritability and affective tension may therefore accompany the more typical depressive manifestations and contribute to the overall clinical burden in patients with a predominantly depressive profile.

An important finding concerned the relationship between HIV clinical stage and psychopathological manifestations. Quantitative levels of depressive symptoms, state and trait anxiety, SCL-90-R depression and anxiety, and general psychopathological distress did not differ significantly between participants with stages I–II and III–IV HIV infection. Thus, the present data do

not support a simple relationship in which advanced HIV clinical stage is accompanied by a proportional increase in the quantitative severity of affective or general psychopathological symptoms.

In contrast, HIV clinical stage was significantly associated with the distribution of the predominant clinical-psychopathological profiles. The anxiety profile was more frequently represented among participants with stages I–II, whereas the depressive profile was substantially more frequent among those with stages III–IV. The asthenic-cognitive profile was represented in both stage groups without a similarly pronounced directional difference. These findings suggest that HIV clinical stage may be related more closely to the structure of the predominant psychopathological presentation than to the absolute quantitative severity of the measured symptoms.

This distinction between symptom severity and symptom structure is clinically relevant. Participants at different HIV clinical stages could demonstrate comparable quantitative levels of affective or general psychopathological symptoms while differing in the predominant organization of their clinical manifestations. Therefore, assessment based exclusively on total psychometric scores may not fully capture clinically relevant differences in psychopathological presentation.

Several interpretations of the observed profile distribution may be considered. An anxiety-dominant presentation at earlier HIV stages may potentially be associated with uncertainty regarding future health, heightened monitoring of bodily sensations, concerns about disease progression, and long-term treatment. A depressive presentation at advanced stages may potentially reflect cumulative illness burden, previous medical complications, functional limitations, treatment fatigue, or changes in perceptions of future prospects. However, these explanations remain hypothetical because the potential mechanisms underlying the observed associations were not directly assessed in the present study.

Moreover, the cross-sectional design does not allow the observed differences in profile distribution to be interpreted as a temporal transition from anxiety to depression during HIV progression. The study demonstrates an association between HIV clinical stage and the predominant psychopathological profile at the time of assessment but does not establish the direction or mechanism of this relationship. Longitudinal observation would be required to determine whether the predominant clinical-psychopathological pattern remains stable or changes over time within individual patients.

The asthenic-cognitive profile represents another clinically relevant finding. Persistent fatigue, reduced working capacity, and concentration difficulties predominated in this profile, whereas depressive, anxiety, and general psychopathological scores were substantially lower than in the anxiety and depressive profiles. This combination indicates that prominent fatigue and cognitive complaints in PLWH should not automatically be interpreted as manifestations of depression or anxiety, particularly when the accompanying affective symptom burden is comparatively low.

At the same time, the term “asthenic-cognitive profile” in the present study is descriptive and should not be interpreted as establishing a specific neurological or neurocognitive diagnosis. The study did not include a comprehensive neuropsychological battery sufficient to diagnose HIV-associated neurocognitive disorder. Therefore, the observed fatigue, reduced working capacity, concentration difficulties, and subjective cognitive complaints require broader differential assessment and cannot be attributed to a specific aetiological mechanism on the basis of the present data.

The differentiation of the three profiles also demonstrates the complementary value of clinical-psychopathological and psychometric assessment. Standardized instruments quantified depressive, anxiety, and general psychopathological manifestations, whereas clinical assessment characterized how individual symptoms were organized within the participant's current mental state. The correspondence between clinical and psychometric characteristics was particularly apparent for the anxiety and depressive profiles, while the asthenic-cognitive profile demonstrated the importance of considering clinically relevant complaints that may coexist with comparatively low levels of affective symptoms.

From a practical perspective, the findings suggest different priorities for clinical assessment depending on the predominant presentation. In an anxiety profile, particular attention should be paid to internal tension, illness-related fears, anxious fixation on bodily sensations, sleep disturbance, and concentration difficulties. In a depressive profile, assessment should focus on depressed mood, anhedonia, hopelessness, guilt-related experiences, irritability, and functional impairment. In an asthenic-cognitive profile, fatigue and cognitive complaints require broader differential assessment, including consideration of potential medical, neurological, sleep-related, treatment-related, and psychological contributors.

Overall, the findings support the use of syndrome-oriented clinical assessment as a complementary, rather than alternative, approach to categorical psychiatric diagnosis and standardized psychometric assessment. Identification of a predominant clinical-

psychopathological profile does not replace diagnosis and should not be interpreted as a new diagnostic classification. Its potential clinical value lies in characterizing the leading structure of the current mental state and identifying symptom domains that may require more detailed assessment in an individual patient.

Strengths and limitations

A strength of the present study was the combination of direct clinical-psychopathological assessment with standardized measures of depressive, anxiety, and general psychopathological symptoms in a sample including all four clinical stages of HIV infection. Assessment of predominant clinical-psychopathological profiles allowed syndrome-level heterogeneity to be examined without treating these profiles as independent diagnostic categories.

Several limitations should be acknowledged. The cross-sectional design precludes causal conclusions and does not allow assessment of transitions between profiles over time. The single-center setting may limit generalizability. Profile classification was based on clinical-psychopathological assessment and requires external replication. Psychometric measures were partly based on self-report and may be influenced by reporting characteristics. The study did not include a comprehensive neuropsychological battery sufficient to diagnose HIV-associated neurocognitive disorder. Finally, individual exposure to war-related stress was not quantified, and the cohort included participants assessed both before and after the beginning of the full-scale invasion; therefore, the independent contribution of wartime stress could not be determined.

CONCLUSIONS

People living with HIV demonstrated distinct clinical-psychopathological patterns. The anxiety profile was characterized predominantly by internal tension, illness-related fears, anxious fixation on bodily sensations, and the highest level of state anxiety, whereas the depressive profile was associated with the greatest severity of depressive symptoms and general psychopathological distress and showed the highest observed hostility score. The asthenic-cognitive profile was characterized mainly by persistent fatigue, reduced working capacity, and concentration difficulties accompanied by comparatively lower levels of affective and general psychopathological symptoms.

HIV clinical stage was not associated with a simple quantitative increase in depressive, anxiety, or general psychopathological symptom severity. However, it was significantly associated with the distribution of clinical-psychopathological profiles, with the anxiety profile more frequently represented among participants with stages I–II and the depressive profile among those with stages III–IV. These findings support the complementary use of syndrome-oriented clinical assessment alongside categorical psychiatric diagnosis and standardized psychometric measures to characterize the heterogeneity of mental health manifestations in PLWH.

PROSPECTS FOR FUTURE RESEARCH

Prospective multicenter studies are needed to determine the longitudinal stability and possible transitions of the identified clinical-psychopathological profiles, clarify their biological and psychosocial determinants, and assess whether profile-based clinical stratification may contribute to the selection of individualized psychiatric and psychosocial interventions in people living with HIV.

AUTHOR CONTRIBUTIONS

Oksana Cherevko – study conception and design; data collection and analysis; statistical analysis; manuscript preparation. Hanna Kozhyna – study conception and design; manuscript preparation; critical review of the manuscript; final approval of the manuscript. Authors have read and approved the final version of the manuscript.

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CONFLICT OF INTEREST

The authors have no conflict of interest to declare.

ARTIFICIAL INTELLIGENCE DISCLOSURE

Generative artificial intelligence tools were used for language editing and stylistic refinement of the manuscript. All scientific content, interpretation of the results, and final wording were reviewed and approved by the authors, who take full responsibility for the content of the article.

ETHICAL CONSIDERATIONS

The study was conducted in accordance with the ethical principles of the Declaration of Helsinki and was approved by the Commission on Bioethics Compliance in Experimental and Clinical Research of the Medical Institute of Sumy State University. Ethical approval was obtained before the initiation of the study and subsequently confirmed by the Commission (Protocol No. 1/05, May 18, 2026). All participants provided voluntary written informed consent before inclusion in the study. Confidentiality and anonymity of individual clinical data were maintained throughout data collection, analysis, and presentation.

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