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Individual aggressiveness of contemporary Ukrainian medical students during the early years of training

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The ongoing War for the Independence of Ukraine turns aggression into a survival tool, resulting in social withdrawal and persistent psychological distress, which influences the level of aggressiveness among modern Ukrainian medical students.

The aim of the study was to assess the degree of aggressiveness in junior medical students (1st and 2nd years) accounting for their mental health problems like stress, depression, and anxiety.

Material and methods. The Buss–Durkee Hostility Inventory (BDHI-75) and DASS21 questionnaire (Ukrainian versions) were used in psychological testing of 257 preclinical medical students who volunteered to participate in the testing (males – 112, females – 145). The test scores were processed statistically using the statistical analysis package "data analysis" in Microsoft Excel. The classic data analysis tools used included descriptive statistics, correlation, t-test, and histogram.

Results. Contemporary Ukrainian junior medical students (MS1 and MS2) demonstrated low aggressiveness (60.31 ± 3.05 %) often combined with high hostility (47.08 ± 3.11 %). Male students scored significantly higher in physical assault than females ($p < 0.001$), while females exhibited higher verbal aggression ($p < 0.05$) and irritability ($p < 0.001$). Moreover, medical students demonstrated elevated anxiety (66.02 ± 2.96 %), stress (59.77 ± 3.06 %), and a tendency toward depression (48.05 ± 3.05 %). Stress and anxiety levels were substantially higher among females compared male students ($p < 0.001$ for both parameters). Statistically significant positive correlations of weak-to-moderate magnitude were found between BDHI-75 subscales (indirect aggression, irritation, resentment, feeling guilty, hostility index) and DASS-21 scores (anxiety, depression, stress).

Conclusions. The "low aggression, high hostility" profile typical of modern Ukrainian medical students reflects deep-seated negative affect, which may predispose individuals to repressed anger, stress internalization, and potential somatic health consequences. Given this psychological profile and the widespread prevalence of stress, depression, and anxiety, Ukrainian medical students require systemic psychological support within the medical university setting.

Ключові слова: студенти-медики, агресивність, депресія, тривожність, стрес.

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Індивідуальна агресивність сучасних українських студентів-медиків на перших роках навчання

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Війна за Незалежність України перетворює агресію на інструмент виживання, призводить до соціального абстрагування та постійної напруженості у суспільстві, що впливає, зокрема, і на рівень агресивності сучасних українських студентів-медиків.

Мета роботи – оцінити рівень агресивності у студентів-медиків молодших курсів (I та II курси), враховуючи такі стани психічного здоров'я, як депресія, тривожність і стрес.

Матеріали і методи. Тести Басса–Даркі (BDHI-75) та DASS21 (українська версія) використано під час психологічного тестування 257 студентів-медиків першого та другого курсів, які добровільно взяли участь у дослідженні. З-поміж учасників – 112 чоловіків, 145 жінок. Результати тестування статистично опрацьовані за допомогою пакета статистичного аналізу «data analysis» Microsoft Excel. Під час дослідження застосовано такі інструменти аналізу даних: описову статистику, кореляції, t-тест і гістограми.

Результати. Встановлено, що сучасні українські студенти-медики першого та другого курсів навчання мають низький рівень агресивності (60,31 ± 3,05 %), що часто поєднується з високим рівнем ворожості (47,08 ± 3,11 %). У студентів чоловічої статі встановлено значно вищі показники фізичної агресії, ніж у студенток ($p < 0,001$). Натомість у студенток зафіксовано вищі рівні вербальної агресії ($p < 0,05$) та дратівливості ($p < 0,001$). Крім того, студентки-медики тривожні (66,02 ± 2,96 %), переживають стрес (59,77 ± 3,06 %), схильні до депресії (48,05 ± 3,05 %). У студенток визначено вірогідно вищий рівень стресу та тривожності порівняно з показниками, що зафіксовані у чоловіків ($p < 0,001$ за обома показниками). Виявлено статистично значущі прямі кореляційні зв'язки між балами за шкалою Басса–Даркі (непряма агресія, роздратування, образа, почуття провини, індекс ворожості) та балами за шкалою DASS-21 (тривога, депресія, стрес).

Висновки. Профіль «низька агресія – висока ворожість», типовий для сучасних українських студентів-медиків, показує глибоко вкорінений негатив, що може призвести до прихованого гніву, інтерналізації стресу та потенційних проблем зі здоров'ям. Враховуючи такий психологічний профіль і високу поширеність депресії, тривоги та стресу, українські студенти-медики потребують системної підтримки в медичному університеті.

Aggressiveness is a personality characteristic that contributes to career and professional progress and is essential in any professional environment. Strictly speaking, it may be considered a factor in social achievements [1]. At the same time, along with the above-mentioned positive aspects, it also entails negative consequences – a tendency toward conflicts, antisocial behavior, violence, destruction [2]. The medical profession requires interacting with patients and their families, healthcare workers, pharmacists, medical equipment technicians, social workers, etc. Consequently, negative manifestations of aggression can create obstacles and complicate the work of healthcare institutions.

The War for the Independence of Ukraine turns aggression into a survival tool, but without psychological support, it results in social withdrawal and persistent community tension. This study explores how this environment influences the psychological profile of the next generation of Ukrainian physicians.

Aim

The aim of the study was to assess the degree of aggressiveness in junior medical students (1st and 2nd years), accounting for concurrent mental health conditions such as stress, depression, and anxiety.

Materials and methods

A cross-sectional study was conducted involving 257 first- and second-year (MS1 and MS2) medical students (112 males and 145 females, mean age – 18.89 ± 0.27 years).

Participation was voluntary, and all subjects provided written informed consent. The Bioethics Committee of National Pirogov Memorial Medical University (Vinnytsia) reviewed the materials provided in the article and found no violations of the ethical standards set forth in applicable regulatory documents, including the Declaration of Helsinki, the Council of Europe Convention on Human Rights and Biomedicine, and other legal acts (Protocol No. 1 of 7 January 2026).

The study was conducted during the second semester of year 1 or the first semester of year 2 to minimize the confounding effect of academic pressure on the results. Paper questionnaire forms with two columns of answers "yes" or "no" were administered. After collection, the forms were reviewed for completeness and accuracy (missed answers, duplicate responses, etc.). Any identified errors were corrected in the presence of the respondent.

The Buss–Durkee Hostility Inventory (BDHI-75) was applied to assess personal aggressiveness (Ukrainian version) [3]. The BDHI-75 comprises 75 items assessing various facets of aggression and hostility, namely: assault, indirect aggression, verbal aggression, negativism, resentment, irritation, suspicion, and guilt [4]. Respondents answered each item "yes" or "no"; total scores were then derived based on the scoring key for each subscale. Additionally, the aggression index (summated score of assault, indirect aggression, and verbal aggression, divided by 3) and the hostility index (summated score of resentment and guilt, divided by 2) were calculated. The calculated indices were compared with tabular standards, and guided by their values, were classified as low, optimal, or high *(Table 1)*.

Given the close interplay between aggression, depression, and stress, concomitant testing of the same students was conducted using the DASS-21 instrument (Ukrainian version) [5]. The DASS-21 includes 21 items and is a short form of the original 42-item DASS questionnaire. Respondents rated each item from 0 ("does not apply to me at all, never") to 3 ("applies to me very much, or most of the time, almost always"). Scores across the distinct subscales, separately assessing stress, depression, and anxiety, were summed and benchmarked against normative standards to determine severity levels *(Table 2)*.

The test results were statistically processed using the statistical analysis package "data analysis" in Microsoft Excel. The classic data analysis tools were used: descriptive statistics, correlation, t-test, and histogram.

Results

Analyzing the mean subscale scores of the BDHI-75 *(Table 3)*, it is important to emphasize that assault levels were significantly elevated in male medical students relative to females ($p < 0.001$). In contrast, female medical students displayed higher verbal aggression ($p < 0.05$) and irritability ($p < 0.001$). Indirect aggression levels did not differ significantly between male and female students. The mean values for the assault, verbal, and indirect aggression scales fell within the optimal normative range of the BDHI-75; however, the mean score for the aggression index in medical students was outside the optimal range. In particular, it corresponded to the low category, while the mean hostility index reflected the upper limit of the optimal range.

The majority of students (60.31 ± 3.05 %) demonstrated low aggression (males – 61.61 ± 4.60 %, females – 59.31 ± 4.08 %, $p > 0.05$), approximately one-third (35.02 ± 2.98 %) showed optimal levels (males – 34.82 ± 4.50 %, females – 35.17 ± 3.97 %, $p > 0.05$) and very few (under 5 %) exhibited high aggression (males – 3.57 ± 1.75 %, females – 5.52 ± 1.90 %, $p > 0.05$), with no statistically significant gender-related differences in these distributions *(Fig. 1)*.

In contrast to the low aggression profile, medical students exhibited markedly high hostility: a high hostility level was recorded in 47.08 ± 3.11 % of the surveyed students (males – 40.18 ± 4.63 %, females – 52.41 ± 4.15 %, the gender-related difference was statistically significant, $p < 0.05$), an optimal level was observed in a comparable proportion (47.47 ± 3.11 % of the surveyed students, however, there were more males with an optimal level – 53.57 ± 4.71 % than females – 42.76 ± 4.11 % though this difference was not statistically significant, $p > 0.05$) *(Fig. 1)*. Only a small minority (5.45 ± 1.42 %) exhibited low hostility (males – 6.25 ± 2.30 %, females – 4.83 ± 1.78 %, $p > 0.05$). Based on these findings, medical students demonstrated a characteristic profile of high hostility combined with low aggressiveness.

When studying the correlations between test scores, a close positive relationship was found between assault and indirect aggression ($r_{xy} = 0.29$, $p < 0.001$), and between assault and verbal aggression ($r_{xy} = 0.36$, $p < 0.001$). Assault was also positively correlated with irritation ($r_{xy} = 0.25$, $p < 0.001$), negativism ($r_{xy} = 0.25$, $p < 0.001$), resentment ($r_{xy} = 0.19$, $p < 0.01$), suspicion ($r_{xy} = 0.19$, $p < 0.01$), and the

Table 1. BDHI-75 standards for determining the aggression and hostility indices (in scores)

Index level	Aggression index (scores)	Hostility index (scores)
Low	≤17	≤4
Optimal	18–25	5–10
High	≥26	≥11

Table 2. DASS-21 score ranges for stress, depression, and anxiety levels

Index level	DASS21 Scores		
	Depression	Anxiety	Stress
Normal	0–4	0–3	0–7
Mild	5–6	4–5	8–9
Moderate	7–10	6–7	10–12
Severe	11–13	8–9	13–16
Extremely severe	≥14	≥10	≥17

Table 3. Mean BDHI-75 scores, M ± m

Index	All medical students, n = 257	Female students, n = 145	Male students, n = 112	Statistical significance of gender-related differences, p
Assault (physical aggression)	5.50 ± 0.13	5.02 ± 0.18	6.11 ± 0.18	<0.001
Indirect aggression	4.77 ± 0.11	4.97 ± 0.14	4.51 ± 0.15	>0.05
Verbal aggression	7.42 ± 0.15	7.71 ± 0.20	7.05 ± 0.22	<0.05
Irritation	5.78 ± 0.14	6.28 ± 0.17	5.14 ± 0.22	<0.001
Negativism	2.38 ± 0.09	2.43 ± 0.11	2.32 ± 0.13	>0.05
Resentment	4.51 ± 0.11	4.68 ± 0.15	4.29 ± 0.17	>0.05
Suspicion	5.08 ± 0.14	5.10 ± 0.17	5.05 ± 0.23	>0.05
Feeling guilty	5.50 ± 0.13	5.66 ± 0.18	5.29 ± 0.19	>0.05
Aggression index	16.65 ± 0.30	16.81 ± 0.42	16.44 ± 0.45	>0.05
Hostility index	10.02 ± 0.22	10.37 ± 0.27	9.57±0.35	>0.05

Table 4. Mean DASS-21 scores, M ± m

Index	All medical students, n = 256	Female students, n = 147	Male students, n = 109	Statistical significance of gender-related differences, p
Depression	5.59 ± 0.29	5.92 ± 0.37	5.15 ± 0.35	>0.05
Anxiety	6.04 ± 0.26	7.07 ± 0.35	4.63 ± 0.37	<0.001
Stress	8.76 ± 0.27	9.69 ± 0.34	7.51 ± 0.42	<0.001

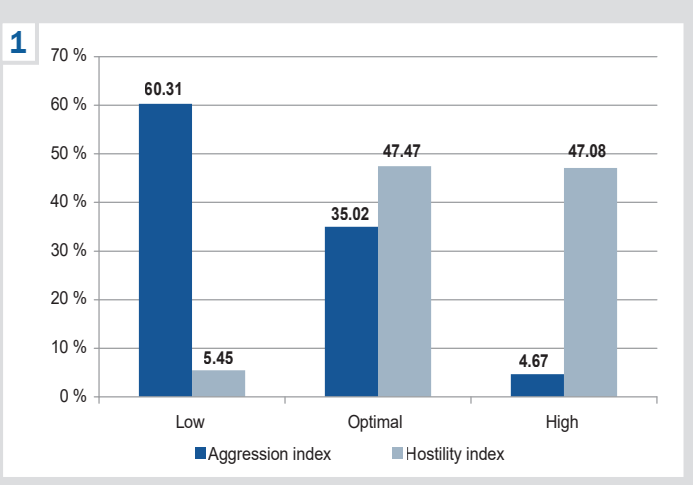

Fig. 1. Medical students' distribution across levels of hostility and aggression.

hostility index (r_{xy} = 0.18, p < 0.01). Indirect aggression was significantly associated with irritation (r_{xy} = 0.41, p < 0.001), resentment (r_{xy} = 0.32, p < 0.001), verbal aggression (r_{xy} = 0.36, p < 0.001), negativism (r_{xy} = 0.29, p < 0.001), feeling guilty (r_{xy} = 0.22, p < 0.001), the hostility index (r_{xy} = 0.29, p < 0.001), and suspicion (r_{xy} = 0.19, p < 0.01). Verbal aggression was directly linked to the hostility index (r_{xy} = 0.31, p < 0.001), as was feeling guilty (r_{xy} = 0.32, p < 0.001).

An increase in irritation among medical students was associated with elevated negativism (r_{xy} = 0.31, p < 0.001), resentment (r_{xy} = 0.47, p < 0.001), suspicion (r_{xy} = 0.36, p < 0.001), verbal aggression (r_{xy} = 0.40, p < 0.001), feeling guilty (r_{xy} = 0.23, p < 0.001), the aggression index (r_{xy} = 0.47, p < 0.001), and the hostility index (r_{xy} = 0.63, p < 0.001) (in all cases the correlations were positive and statistically significant). Negativism was positively correlated with resentment (r_{xy} = 0.24, p < 0.001), suspicion (r_{xy} = 0.24, p < 0.001), verbal aggression (r_{xy} = 0.43, p < 0.001), indices of aggressiveness (r_{xy} = 0.42, p < 0.001) and hostility (r_{xy} = 0.31, p < 0.001). A strong positive relationship was observed between suspicion and the hostility index (r_{xy} = 0.83, p < 0.001), with weaker associations between suspicion and the aggressiveness index (r_{xy} = 0.33, p < 0.001), suspicion and feeling guilty (r_{xy} = 0.21, p < 0.001), suspicion and verbal aggression (r_{xy} = 0.26, p < 0.001). Significant direct correlations were also found between resentment and suspicion (r_{xy} = 0.40, p < 0.001), resentment and feeling guilty (r_{xy} = 0.40, p < 0.001), resentment and the aggression index (r_{xy} = 0.42, p < 0.001), resentment and the hostility index (r_{xy} = 0.68, p < 0.001), and resentment and verbal aggression (r_{xy} = 0.23, p < 0.001).

Given the well-established cyclical relationship between hostility, aggression, depression, and stress, wherein each state may function as both a cause and a consequence of the others, stress, anxiety, and depression levels were assessed in the preclinical student cohort. Mean DASS-21 values are presented in *Table 4*.

The mean scores indicate mild depression, moderate anxiety, and mild stress among Ukrainian medical students. Female medical students exhibited markedly higher anxiety and stress levels compared to male colleagues (p < 0.001 for both).

Our data indicate that approximately half of the medical students surveyed (51.95 ± 3.12 %) were free from depression, while a significant portion experienced various levels, with moderate depression (20.70 ± 2.53 %) being the most prevalent among those affected, followed by mild (12.50 ± 2.07 %), severe (7.42 ± 1.64 %), and extremely severe (7.42 ± 1.64 %) depression, indicating a substantial mental health concern for about half the students. No statistically significant gender differences in depression severity were observed.

The distribution by anxiety severity was as follows: 66.02 ± 2.96 % of students demonstrated elevated anxiety, of whom 21.09 ± 2.55% scored in the extremely severe range, 13.28 ± 2.12 % in the severe range, 12.50 ± 2.07 % in the moderate range, and 19.04 ± 2.46 % in the mild range; 33.98 ± 2.96 % had normal anxiety levels. Notably, among males, the proportion with normal anxiety levels (52.29 ± 4.78 %) was significantly higher than among females (20.42 ± 3.32 %, p < 0.001). Conversely, females showed a substantially higher prevalence of extremely

severe anxiety (28.57 ± 3.73 %) compared to their male peers (11.01 ± 2.99 %, p < 0.001).

The majority of students (59.77 ± 3.06 %) experienced stress of varying severity; the absence of stress was recorded in only 40.23 ± 3.06 % of respondents. Significant gender differences were observed: 70.07 ± 3.78 % of females experienced stress compared to 45.87 ± 4.77 % of males (p < 0.001); furthermore, the proportion of female students with moderate stress (26.53 ± 3.64 %) was nearly twice that of male students (13.76 ± 3.30 %, p < 0.001).

Correlation analysis revealed that indirect aggression was positively correlated with anxiety (r_{xy} = 0.26, p < 0.001) and stress (r_{xy} = 0.20, p < 0.01), while assault and verbal aggression did not demonstrate significant linear associations with DASS-21 scores. A direct correlation was observed between irritation and depression (r_{xy} = 0.18, p < 0.01), irritation and anxiety (r_{xy} = 0.28, p < 0.001), irritation and stress (r_{xy} = 0.31, p < 0.001). Feelings of resentment were significantly associated with depression (r_{xy} = 0.31, p < 0.001), anxiety (r_{xy} = 0.33, p < 0.001), and stress (r_{xy} = 0.33, p < 0.001). Negativism showed no significant correlation with DASS-21 scores. Suspicion correlated only with stress (r_{xy} = 0.14, p < 0.05), as did the aggression index (r_{xy} = 0.15, p < 0.05). Feeling guilty demonstrated statistically significant associations with all three DASS-21 scores: depression (r_{xy} = 0.17, p < 0.05), anxiety (r_{xy} = 0.26, p < 0.001), and stress (r_{xy} = 0.28, p < 0.001). Similarly, the hostility index was positively correlated with stress (r_{xy} = 0.28, p < 0.001), anxiety (r_{xy} = 0.25, p < 0.001), and depression (r_{xy} = 0.23, p < 0.001).

Strong intercorrelations were observed among the DASS-21 subscales: depression correlated directly with anxiety (r_{xy} = 0.60, p < 0.001) and stress (r_{xy} = 0.62, p < 0.001), and anxiety correlated with stress (r_{xy} = 0.73, p < 0.001).

Discussion

As a complex psychological construct, individual aggressiveness involves the internal drive to dominate or harm others. It is shaped by a combination of life experiences and genetic predisposition, manifesting in adaptive forms, such as assertiveness, or maladaptive forms, including physical aggression and emotional manipulation.

Indeed, aggressiveness is inherently ambivalent. Individuals with pronounced aggressiveness are often highly goal-directed and perform effectively under pressure. They tend not to avoid confrontation and may challenge authority when they identify an opportunity for improvement or encounter injustice. Adverse effects of workplace aggression include increased psychological distress and burnout, erosion of confidence and psychological safety, and manifestations of depression, anxiety, and post-traumatic stress. Although aggressive conduct may function as a dominance strategy, it often results in reputational damage when the collective responds by excluding the individual to preserve social cohesion. The resulting absence of interpersonal trust impairs cognitive flexibility, leading to suboptimal decision-making. Furthermore, elevated levels of aggression are associated with autonomic dysregulation, often manifesting as somatic complaints such as insomnia and emotional exhaustion.

Table 5. Prevalence rates of stress, depression, and anxiety in medical students (a cross-regional comparison)

Country	Depression	Anxiety	Stress
Ethiopia [11]	52 %	59.1 %	–
Libya [14]	29.7 %	38.9 %	28.6 %
Nepal [16]	46.43 %	58.44 %	29.22 %
Saudi Arabia [17]	54 %	53 %	38 %
Bangladesh [18]	40 %	45 %	–
Peru [19]	71.6 %	71.9 %	62.7 %
Ukraine [20]	52.94 %	64.17 %	50.80 %
Gaza Strip [21]	69.0 %	77.3 %	65.2 %

Individual aggressiveness in medical students may be framed as an ineffective coping mechanism in response to chronic occupational stressors and emotional exhaustion, frequently manifesting as impaired impulse control or emotional dysregulation triggered by the high-pressure clinical environment. Sachdeva A. et al., studying aggression and hostility in medical students at a tertiary institution in Northern India, found the highest mean subscale score for hostility, with moderate-to-high variability in aggression traits and more pronounced cognitive (hostility) and physical components of aggression than verbal manifestations [6]. Researchers have argued that aggression levels in medical students vary according to year of study, marital status, gender, and sleep habits. Among Pakistani medical students, 67.5 % showed signs of irritability, while 70 % reported not engaging in conflict without provocation [7].

Other Pakistani researchers noted that sleep deprivation has a negligible direct effect on aggression but a significant positive association with memory problems, which in turn links to increased aggression [8]. Consistent with our observations, T. R. Dhamal & M. R. Nimbalkar reported that female medical students scored higher on agreeableness, conscientiousness, and openness to experience, yet exhibit higher levels of aggression than their male counterparts [9]. In the present study, however, females demonstrated higher irritability and verbal aggression, but lower physical assault compared to males, with a significantly larger proportion of females recording high hostility index scores (females – 52.41 ± 4.15 %, males – 40.18 ± 4.63 %, p < 0.05).

Our findings align with those of Y. Guo, who reported that male students demonstrate significantly higher physical aggression than females (p < 0.001), whereas females report substantially higher anger scores (p < 0.01) [10]. Guo Y. further identified a positive association between various forms of aggression and neuroticism, suggesting that emotional instability may serve as a predictor of aggressive tendencies. The characteristic profile of Ukrainian MS1 and MS2 students observed in the present study, combining low overall aggression with elevated hostility, indicates that students may harbor internal tension while effectively concealing these feelings through professional demeanor; their capacity to suppress irritation enables de-escalation and maintenance of a composed outward appearance.

The relationships between aggression and such mental health conditions as stress, depression, and anxiety are frequently complex and bidirectional [11,12]. The rigorous academic demands of medical education play a pivotal role in the widespread prevalence of anxiety, depression, and stress among medical students. The emotional wellbeing of

medical students is primarily strained by academic pressure, the nature of clinical training, and external socio-economic stressors such as financial hardship, social unrest, armed conflict, and the ongoing consequences of the COVID-19 pandemic [11,13,14,15].

Prevalence rates of stress, depression, and anxiety among medical students vary substantially *(Table 5)*, depending on the stage of medical training, year of study, and numerous socio-economic factors. For instance, non-local students have been shown to exhibit greater anxiety levels than local ones [11].

Among additional predictors of depression and anxiety are gender, year of study, age, and commuting time to the university [14,17,18]. A study conducted in California found that academic year positively correlated with stress ($p < 0.001$), anxiety ($p < 0.001$), and depression ($p = 0.03$) [22]. Academic dissatisfaction and a personal history of psychiatric illness also contribute to the development of depression, stress, and anxiety [16]. Regular physical activity and sleeping eight or more hours per night have been shown to reduce the prevalence of these conditions [19,21,23]. An additional factor associated with stress, depression, and anxiety is relationship status, with single students showing higher vulnerability (based on logistic regression analysis results) [24].

Medical students in Ukraine exhibit high rates of stress, depression, and anxiety, attributable to both socio-economic factors and the ongoing Russian military aggression. According to O. V. Lototska et al. from Ternopil National Medical University, 50 % of medical students were in a state of stress [23], with the majority continuously monitoring frontline news on Telegram. Furthermore, a direct correlation was found between respondents' mental wellbeing and the involvement of their relatives in the conflict.

Medical students at Vinnytsia National Pirogov Memorial Medical University were assessed at the outbreak of the War for the Independence of Ukraine and reassessed after a two-year interval. Immediately after the onset of the war, the percentage of medical students with depression was 52.94 %, with anxiety – 64.17 %, with stress – 50.80 % [20]. The present study, conducted two years later, found a slightly lower proportion of students with depression (48.05 %), but higher proportions with anxiety (66.02 %) and stress (59.77 %), despite the students residing in a non-combat zone.

These findings suggest that implementing targeted programs to lower mental health problems such as stress, depression, and anxiety may improve the quality of life of Ukrainian medical students.

Conclusions

1. Modern Ukrainian medical students in their first and second years of study demonstrate low aggressiveness (60.31 ± 3.05 %), which often combines with high hostility (47.08 ± 3.11 %). This "low aggression, high hostility" profile reflects deep-seated negative affect, which may predispose individuals to repressed anger, stress internalization, and potential health consequences.

2. Medical students demonstrate elevated anxiety (66.02 ± 2.96 %), stress (59.77 ± 3.06 %), and a tendency toward depression (48.05 ± 3.05 %), and therefore require systemic psychological support within the medical university setting.

3. Statistically significant direct correlations exist between BDHI-75 subscale scores (indirect aggression, irritation, resentment, feeling guilty, hostility index) and DASS-21 scores (anxiety, depression, stress). These associations indicate that irritability, resentment, and guilt, as measured by the BDHI-75, frequently precede or manifest as integral components of depression, anxiety, and stress, as captured by the DASS-21.4. Gender-based differences indicate that female students exhibit lower physical aggression but greater verbal aggression and psychological distress, including anxiety and irritability.

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