https://doi.org/10.29038/2227-1376-2024-44-laz УДК 159.98:613.86

THE IMPACT OF NEUROSCIENCE-BASED MINDFULNESS TRAINING ON MENTAL HEALTH IN FUTURE PSYCHOLOGISTS

Lazorko Olha
Lesya Ukrainka Volyn National University,
Lutsk, Ukraine
Lazorko.olha@vnu.edu.ua
ORCID: https://orcid.org/0000-0002-8427-5049

Purpose. This study investigates the effectiveness of a neuroscience-based mindfulness training program on emotional states, self-compassion traits and well-being status among psychology students during an 8-week intervention. The work focuses on developing emotional regulation, decreasing stress and depression, and increasing self-compassion and mindfulness — all of which are crucial skills for professional practice.

Methods. This pilot study included fifty psychology students (M = 23.5, SD = 2.8) who were assessed using the DASS-21 for stress, anxiety, depression and Self-Compassion Scale for self-kindness, mindfulness and related traits before and after a special training program along with the BBC-SWB questionnaire for psychological, physical and subjective well-being. Statistical analyses such as paired t-tests, correlation analysis and hierarchical regression were used to assess the intervention's effectiveness and explore predictive relationships among variables.

Results. The program was associated with significant reductions in anxiety, stress, and depression and increases in self-kindness, mindfulness, and psychological well-being. Given that emotional states and self-compassion traits function as mutually reinforcing factors, correlations provided evidence based on the holistic benefits of the program. Hierarchical regression analysis showed that both pre-intervention anxiety ($\beta = 0.45$, $p < 0.001$) and self-kindness ($\beta = 0.35$, $p = 0.05$) significantly predicted psychological well-being after the intervention. These variables combined explained 52% of the outcome variance ($R^2 = 0.52$, $p < 0.001$). Mindfulness explained an additional 17% variance beyond all other variables combined, affirming its role as a transformational variable within the model.

Conclusions. This mindfulness training, based on neuroscience principles and research findings, is designed to decrease psychological suffering and enhance psychological resilience and self-compassion. The results call for incorporating such training within psychology educational programs, thus enhancing personal health and professional competence. Longitudinal studies investigating the long-term effects of mindfulness practices and their use in a broader range of populations are warranted for future research.

ISSN 2308-3743 (Online), ISSN 2227-1376 (Print)

Keywords: emotional regulation, mindfulness training, self-compassion, mental health education, psychological well-being.

Лазорко Ольга. Вплив тренінгу усвідомленості на основі нейронауки на психічне здоров'я майбутніх психологів.

Мета. це дослідження має на меті проаналізувати ефективність тренінгової програми усвідомленості на основі нейронауки щодо емоційних станів, складових співчуття до себе та суб'єктивного благополуччя серед студентів-психологів протягом 8-тижневого втручання. Тренінг зосереджений на розвитку емоційної регуляції, зменшенні стресу та депресії, а також на підвищенні співчуття до себе та усвідомленості — усе це є ключовими навичками для професійної практики.

Методи. це пілотне дослідження включало п'ятдесят студентів-психологів (M = 23,5, SD = 2,8), яких оцінювали за шкалою DASS-21 на рівень стресу, тривоги, депресії та за Шкалою самоспівчуття щодо доброзичливості, усвідомленості та відповідних рис до та після спеціальної навчальної програми разом з опитувальником BBC-SWB щодо психологічного, фізичного та суб'єктивного благополуччя. Статистичний аналіз, такий як парні t-тести, кореляційний аналіз та ієрархічна регресія, використовувалися для оцінки ефективності втручання та дослідження прогностичних зв'язків між змінними.

Результати. Тренінг дозволив досягти значного зниження тривоги, стресу та депресії та підвищення доброзичливості, усвідомленості та психологічного благополуччя. Враховуючи, що емоційні стани та самоспівчуття функціонують як взаємно підсилювальні фактори, кореляційний аналіз довів перевагу тренінгу. Ієрархічний регресійний аналіз показав, що як тривога до втручання ($\beta = 0,45$, $p < 0,001$), так і доброзичливість до себе ($\beta = 0,35$, $p = 0,05$) суттєво прогнозують психологічне благополуччя після втручання. Ці змінні разом пояснюють 52% дисперсії результату ($R^2 = 0,52$, $p < 0,001$). Усвідомленість пояснює додаткову дисперсію на 17% порівняно з усіма іншими змінними разом, підтверджуючи її роль як трансформаційної змінної в моделі.

Висновки. результати аналізу даних дозволяють виснувати, що тренінг усвідомленості на основі нейронауки може використовуватись для зменшення психологічного стресу та тривожності та підвищення психологічного благополуччя та співчуття до себе. Результати підкреслюють необхідність включення такого навчання в освітні програми з психології, що дозволить покращити психічне здоров'я та професійну компетентність. Майбутні дослідження можуть вивчати довгострокові наслідки практик усвідомленості, а також перспективи їх використання в ширшому діапазоні груп населення.

Ключові слова: емоційна регуляція, тренінг усвідомленості, співчуття до себе, освіта у сфері психічного здоров'я, психологічне благополуччя.

Introduction. The full-scale war has driven to unprecedented levels the mental health crisis in Ukraine, and it is a humanitarian challenge that we must all tackle with quickness and compassion. Now, millions of Ukrainians are suffering, and if they are not in the line of fire – hostile territory will be forced to flee, and insecurity and financial instability await them everywhere. They will face isolation for months or years on end. Such overwhelming circumstances have profoundly affected the emotional health of the population, increasing anxiety, depression and post-traumatic stress disorder (WHO, 2024).

According to the «WHO 2024 Emergency Appeal: Ukraine», almost 9.6 million people in Ukraine are at risk of developing mental health disorders, and over 3.9 million people have moderate to severe symptoms. Even though the need for mental health and psychosocial support services is growing, access to these services continues to be extremely limited. The presence of this problem, in turn, leads to extremely significant difficulties both for the state and society, while reaching the appropriate level of health becomes one of the priority areas of state policy (Kostruba & Fishchuk, 2023). Special requirements arise in the field of training of professional specialists in the field of mental health of the population, primarily psychologists. Caring in wartime calls upon the highest levels of professional skill, emotional fortitude and self-control. Alarmingly, new evidence indicates that many of the students studying psychology —the future mental health professionals of Ukraine—are experiencing emotional distress and low well-being (Savelyuk, 2022). Not only is it imperative that these students receive mental health support and the tools they need to cope with their stress, but this also places further weight on the fact that these students will be seen caring for patients one day soon—and the proposed study emphasizes this point. In the face of these challenges, mindfulness-based interventions provide a glimmer of light.

Amid these challenges, mindfulness-based interventions offer a beacon of hope. As Kabat-Zinn (2003) emphasized, practices like breathing meditation can help individuals develop emotional stability and self-regulation by fostering awareness and acceptance. Similarly, self-compassion—a way of being kind and understanding toward oneself—has been found to buffer against psychological distress while promoting emotional resilience (Neff & Germer, 2018; Shapiro & Fitch, 2023). Mindfulness and self-compassion can enhance resilience among

psychology students, which is an attractive proposition that can nurture personal and professional health (Tan & Soliman, 2022).

Mindfulness training informed by neuroscience incorporated into educational programs contributes significantly to the improvement of emotional regulation, decrease in stress and increase in kindness towards oneself (Martínez-Rubio et al., 2023; Çağış & Yıldırım, 2024). There is increasing evidence that they can lower stress, anxiety and depression and improve emotional well-being, attention and academic performance (Johnson et al., 2023). They found online mindfulness programs to be as effective as in-person interventions, and when controlling for potential confounders, non-mindfulness-based programs were comparable to mindfulness-based programs (Barcaccia et al., 2024).

They are theoretical and experiential, integrating mindfulness-based practices with a psychobiological understanding of stress to give the participants real-life stress management tools and optimize mental health. That training is invaluable for psychology majors, giving them resilience and the ability to adjust professionally as they enter a world where someone will eventually end up practising their field over time. The present work extends this foundation by evaluating a tailored 8-week, neuroscience-informed mindfulness training developed for future psychologists.

Our 8-week program differs from others because it integrates mindfulness practices, neuroscience-informed psychoeducation, and self-compassion exercises to address emotional distress and teach resilience skills. The objective is to meaningfully support psychology students with actionable and evidence-based strategies for maintaining their mental health and preparing them for professional practice.

Methods. We utilized a quantitative, quasi-experimental, single-group pre-test and post-test design to assess the effects of an 8-week neuroscience-based mindfulness training program on the mental health and well-being of psychology students. It allowed the study of within-subject transformations across time, specifically about emotions, self-compassion and subjective well-being.

The sample comprised students from the Faculty of Psychology at Lesya Ukrainka Volyn National University. The age range of participants was from 18 through 30 years ($M = 24.5$, $SD = 2.8$). The recruitment was done through postering and information sessions across campus. The inclusion criteria were as follows: students currently studying psychology,

aged between 18 and 30 (inclusive) years, can participate in the 8-week intervention across all activities. Exclusion Criteria: Students who had previously completed mindfulness training and those who were already enrolled or participating in other mindfulness-based programs or psychotherapy for mental disorder symptoms that may impact the results of this study.

Of the original cohort of 72 students, 50 completed both pre-and post-tests and were included in the analysis. The reasons for attrition were the non-filling of questionnaires, unavailability, and voluntary withdrawal from the study. An identical approach to the one used here was employed in ethical approval from the university's ethics review board. All participants provided informed consent before the study, where it was made clear that participation is voluntary and they may withdraw at any point. Data confidentiality and anonymity were protected.

Intervention. Participants underwent an 8-week neuroscience-based mindfulness training program designed specifically for this study. Each week included:

1. Mindfulness Practices (Formal): daily 5–20-minute guided meditation practices for emotional regulation and stress management.
2. Neuroscience-Informed Mini-Lectures: this included 15–20-minute discussions on neuroplasticity, the role of the amygdala in stress response, and the prefrontal cortex's involvement in emotional regulation on a weekly basis.
3. Self-Compassion Exercises (Informal Practices): activities to promote self-kindness and discourage self-critical behaviour, like reflective journaling, cognitive reframing and group discussion.
4. Cyclic Homework Goodies: mindfulness exercises daily, with reflective journals to expand their insight gained.

It was a balanced blend of theory and practice, taking students deeper into mindfulness's neurobiology whilst embedding practices in our daily lives. Students were tested after each module and at the end of the course to see if they learned the material.

Measurements. In order to study specific aspects of the mental health of the training participants, we used the following validated psychometric tools:

1. **DASS-21** (Cohen et al., 1983): A self-report 21-item scale measuring depression, anxiety, and stress All items are rated on a 4-point

Likert scale, and higher scores reflect greater severity for each of the seven items in each subscale.

2. **Self-Compassion Scale** (Neff, 2003): Assesses six dimensions of self-compassion, including self-kindness, mindfulness, and over-identification. Scores were reverse-coded for negative traits (e.g., self-judgment) to calculate an overall self-compassion score.

3. **BBC-SWB** (Pontin et al., 2013): Evaluates psychological, physical, and subjective well-being, along with interpersonal relationships. Scores are reported on a 7-point Likert scale, with higher values indicating better well-being.

These Scales were chosen because DASS-21 captures vital emotional states that mindfulness training aims to improve; SCS measures the self-compassion traits targeted by the intervention, aligning with its mindfulness and kindness components; BBC-SWB broadens the evaluation to encompass overall well-being, adding depth to the analysis of training effectiveness.

The two-time points to collect data were as follows: pre-test – administered one week before the intervention to establish baselines; post-test – conducted a week after the final session to measure changes. Statistical analyses were conducted using SPSS (version 27). Paired-sample t-tests were performed to evaluate pre- and post-intervention differences across all measured variables. Pearson correlation analysis was employed to explore relationships between emotional states, self-compassion traits, and well-being outcomes. Hierarchical regression analysis was used to identify predictors of psychological well-being, and Shapiro-Wilk tests confirmed the normality of variable distributions.

Results and Discussion. The results of the study (including descriptive statistics, paired t-tests, correlation analysis and hierarchical regression) are presented in this section. The intervention yielded large effects on emotional states, self-compassion traits, and well-being indices, demonstrating the effectiveness of this mindfulness training grounded in neuroscience. Most scales showed moderate improvement following the intervention, with the largest effects being observed for anxiety, psychological well-being and self-compassion. These findings highlight the meaningful influence of a mindfulness-based program on key emotional and mental health variables. The data are presented as Mean ± SD (Tab. 1).

The Shapiro-Wilk test was performed to check whether the variable distributions followed normality, showing that data had met the assumptions needed for parametric statistical analyses. We performed a paired-sample t-test to assess differences in emotional states, well-being and self-compassion before and after the intervention ($p < 0.05$).

Table 1.

Statistical Comparisons of Pre- and Post-Test Results Across Measured Variables

Variables	**Mean±SD (Pre-Test)**	**Mean±SD (Post-Test)**	**t**	**P**
Anxiety	15.6±4.2	11.2±3.8	-4.4	<0.001
Stress	18.8±5.1	14.7±4.6	-4.1	<0.001
Depression	14.2±4.5	11.5±4.3	-2.7	0.002
Self-Kindness	2.8±0.6	3.4±0.5	+0.6	0.003
Self-Judgment	3.5±0.7	2.9±0.6	-0.6	0.005
Common Humanity	3.1±0.5	3.5±0.5	+0.4	0.018
Mindfulness	3.0±0.5	3.7±0.6	+0.7	<0.001
Psychological Well-Being	4.2±0.8	5.3±0.7	+1.1	<0.001
Physical Well-Being	3.9±0.7	4.4±0.6	+0.5	0.025
Subjective Well-Being	4.0±0.8	4.6±0.7	+0.6	0.011

**Statistically significant at P<0.05*

The intervention significantly reduced anxiety, stress, and depression levels while enhancing self-kindness and psychological well-being throughout the two months following participation. The overall reduction in anxiety scores was significant; these fell by 28% (from 15.6 to 11.2). Stress scores were reduced by 22%(18.8 versus 14.7), while depression fell by 19%(14.2 versus 11.5), suggesting a general improvement in emotional status and less tendency towards sadness. All domains of well-being showed considerable improvement. Psychological well-being increased by 26% (4.2 to 5.3), demonstrating enhanced coping and life satisfaction. Physical well-being increased by 13% (from 3.9 to 4.4), suggesting participants feel healthier, alert and more energetic. Subjective well-being increased by 15% (4.0 to 4.6), indicating several factors contributing to greater happiness and contentment. There were also substantial improvements in the core features of self-compassion. The self-kindness item averaged 2.8 before the study and 3.4 after, a 21% change indicating that participants were more gentle and supportive to themselves. Critical self-talk dropped 17% (3.5 to 2.9). The increase in mindfulness

(23%, from 3.0 to 3.7) indicates improved emotional awareness and the ability to remain grounded in the present moment (Fig. 1).

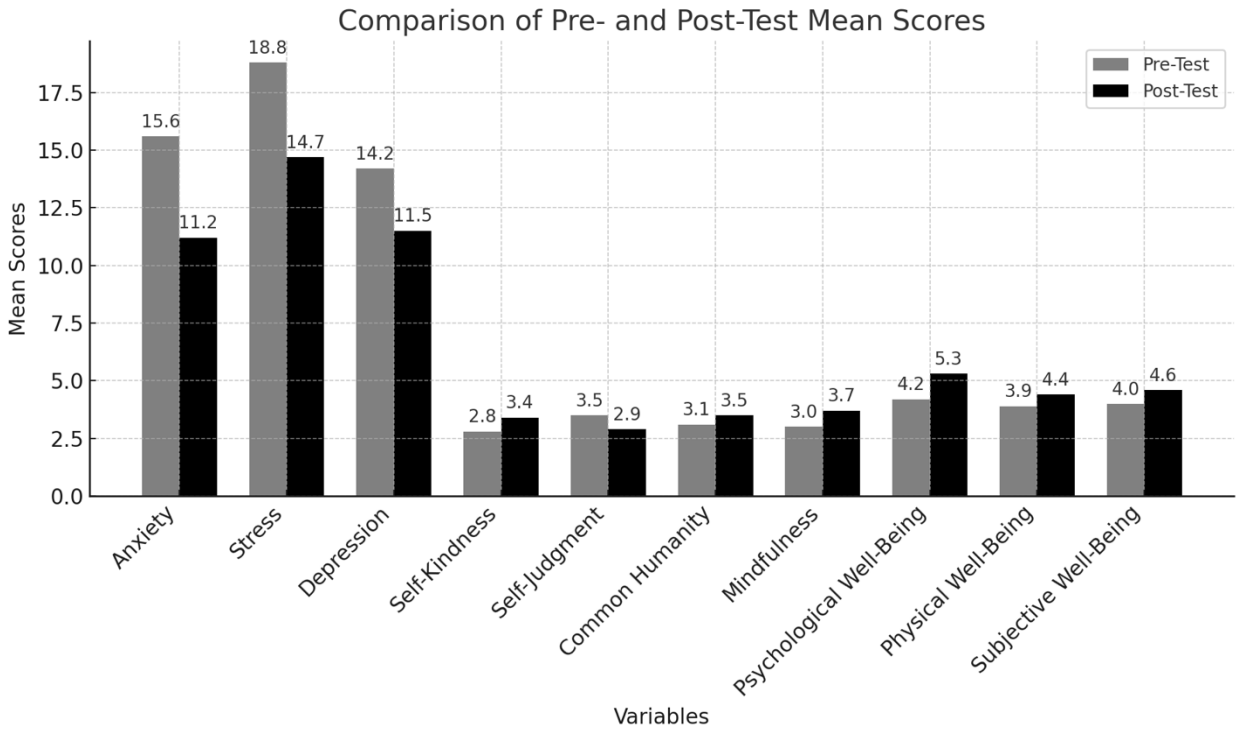

Figure 1. Comparison of Pre- and Post-Tests Mean Scores

The results are a vivid testament to the potential influence of neuro-based mindfulness training on mental well-being, emotional resilience, and self-compassion. It found that anxiety reduction, psychological well-being and mindfulness all yielded the biggest gains, indicating that the program is not only effective in reducing negative emotions but also represents a focus on personal growth. This compelling evidence strengthens the case for including mindfulness training in programs preparing future psychologists — not only as an important tool for their ongoing mental health but also to develop awareness and tools needed to work in high-stress positions throughout their careers.

Before and after the intervention, the key variables examined are significantly correlated (Tab. 2). Stress levels correlated highly with anxiety (r = 0.68) and depression (r = 0.73), which may indicate that as stress levels increase, symptoms of anxiety and depression are also more likely to increase. Also, the analysis showed that anxiety is moderately correlated with depression (r = 0.65), which means if some of them are facing anxiety, they are going to have more amount of depression as well. In a slightly more optimistic finding, the 3rd pillar of self-compassion, which is self-kindness, has been found to correlate moderately with

mindfulness (r = 0.64), implying that those who are taking care of themselves kindly also find it easier to be present and mindful with their thoughts and experiences. In addition, mindfulness is positively associated with psychological well-being (r = 0.58), which signifies its beneficial role in mental health and quality of life.

Table 2.

Correlations Coefficients Among Emotional States, Self-Compassion, and Well-Being (r > 0.5)

Variables	Stress	Anxiety	Depression	Self-Kindness	Mindfulness	Psychological WB
Stress	1.00	0.68	0.73	-	-	-
Anxiety	0.68	1.00	0.65	-	-	-
Depression	0.73	0.65	1.00	-	-	-
Self-Kindness	-	-	-	1.00	0.64	-
Mindfulness	-	-	-	0.64	1.00	0.58
Psychological WB	-	-	-	-	0.58	1.00

- indicate no significant correlation between variables

These findings emphasize several important issues, as illustrated in Table 2. The high degree of association between stress, anxiety and depression calls for an effective need to be met in their management simultaneously. At the same time, self-kindness and mindfulness correlate positively with psychological well-being, suggesting that mindfulness-based self-compassion skills can promote emotional literacy and lead toward a resilience constellation conducive to better mental health (Fig. 2).

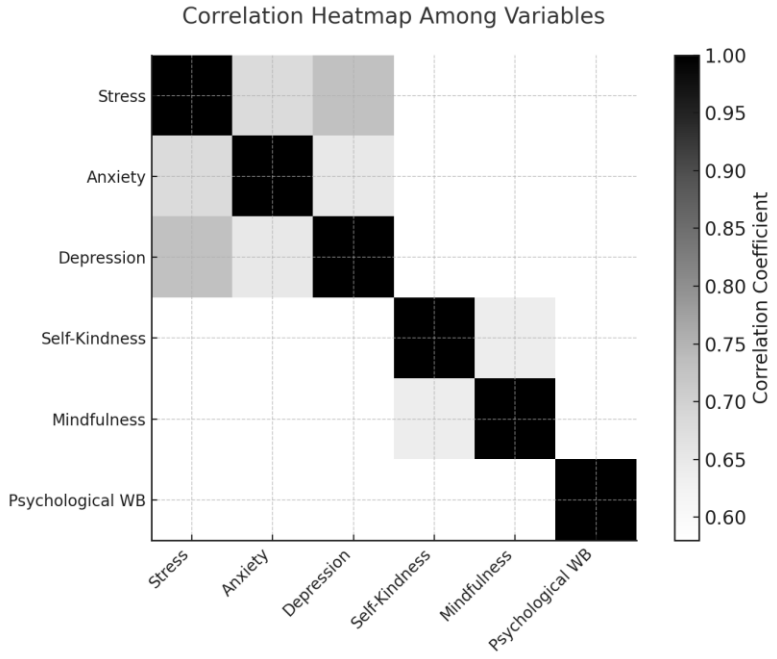

Figure 2. Correlation Heatmap Among Variables

In conclusion, this analysis reveals the exciting prospects of a mindfulness-based approach. Such approaches are important in improving emotional regulation, establishing a sense of purpose, and increasing life satisfaction, effectively promoting overall well-being.

The regression analysis also highlights the utility of pre-training in predicting scores. The bar chart visualizes the association between different predictors and the outcome variable based on standardized beta coefficients (β) (Fig. 3). A more significant predictive effect is indicated by higher β values and strengthens the potential of these methods.

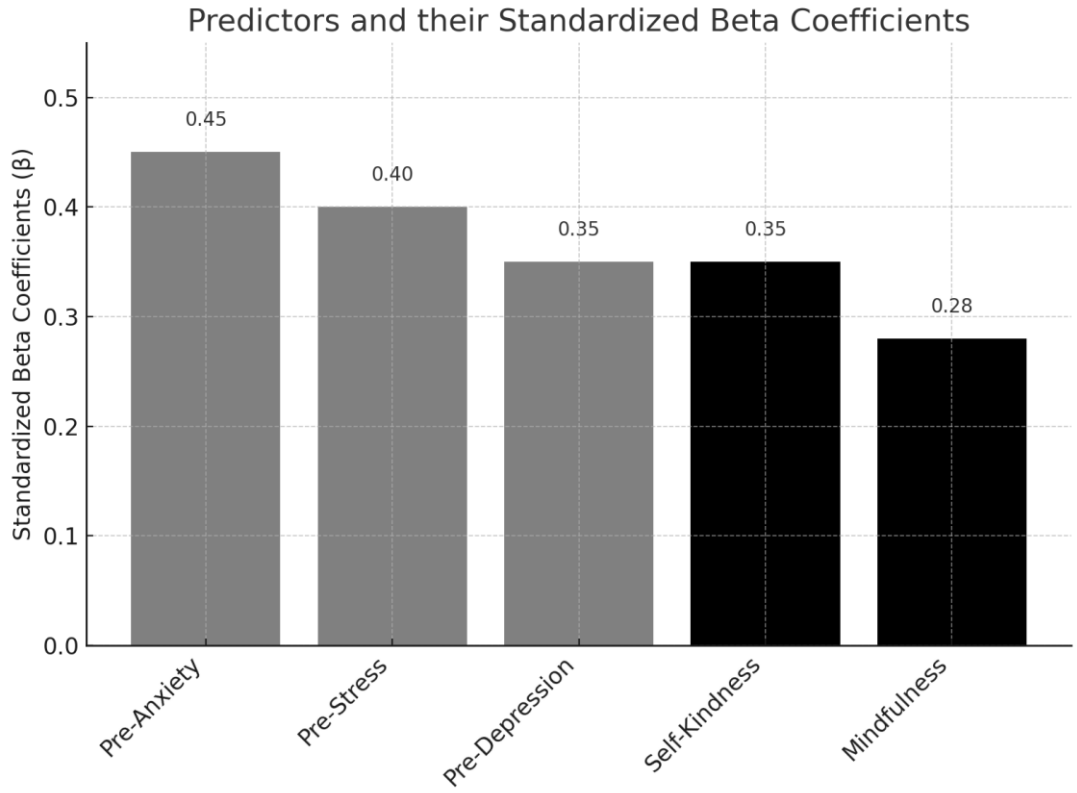

Figure 3. Standardized beta coefficients (β) for the predictors

The key predictors, self-kindness and mindfulness, are significant contributors to psychological well-being, represented in black on the bar chart. At the same time, other predictors are shown in grey for comparison. Each bar includes its respective β value for clarity. Notably, pre-training levels of anxiety, stress, and depression were strong predictors of their post-training levels, emphasizing the influence of initial emotional conditions.

Psychological well-being, however, was most strongly influenced by pre-training self-kindness ($\beta = 0.35$, $p = 0.05$) and mindfulness ($\beta = 0.28$). These findings suggest that individuals with higher levels of self-kindness are better equipped to handle psychological challenges, promoting greater

emotional stability and resilience. Similarly, the effect of mindfulness highlights its role in enhancing emotional regulation and reducing vulnerability to stress-related difficulties. These results indicate that while addressing baseline emotional states like anxiety, stress, and depression is critical, cultivating self-kindness and mindfulness offers a powerful strategy for long-term mental resilience and well-being.

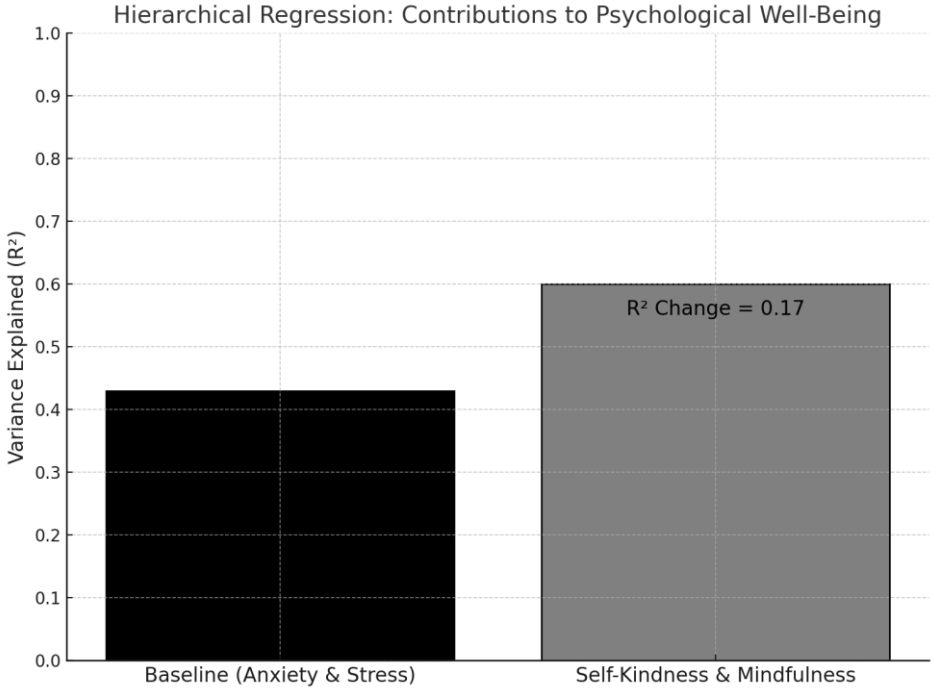

Figure 4. Hierarchical regression: contribution to Psychological Well-Being

Pre-intervention anxiety ($\beta = 0.45$, $p < 0.001$) and self-kindness ($\beta = 0.35$, $p = 0.05$) explained 52% of the variance in outcomes ($R^2 = 0.52$, $p < 0.001$). Hierarchical regression identified key predictors of psychological well-being post-intervention. Adding mindfulness to the model accounted for an additional 17% of the variance (R^2 change = 0.17, $p < 0.001$), further emphasizing its transformative role.

The accompanying bar chart visually represents these findings, showing the variance explained (R^2) by baseline predictors (anxiety and stress) and the added impact of self-kindness and mindfulness (Fig. 4). The increase in R^2 illustrates the transformative effect of these variables on psychological well-being, underscoring their importance in fostering emotional health and resilience.

An analysis of variance (ANOVA) was performed to evaluate the differences between anxiety, stress, and psychological well-being. The findings showed a significant effect, with an F-value of 156.84 and a p-

value under 0.001. Thus, all differences among these variables are statistically significant, non-random and appropriate to the model. These differences are illustrated in the following figure (Fig. 5).

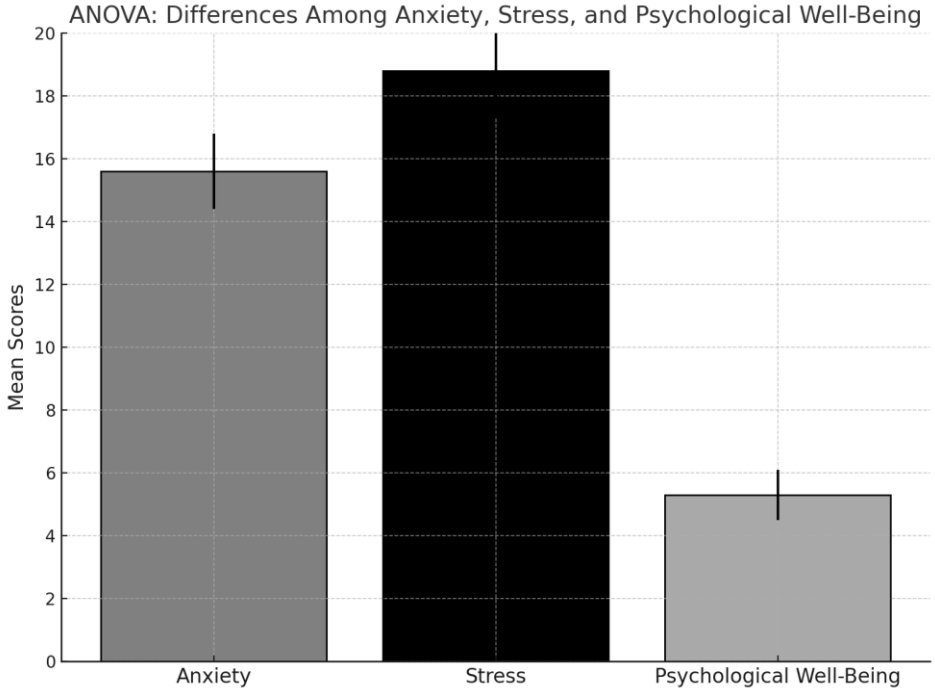

Figure 5. ANOVA: differences among Anxiety, Stress, and Psychological Well-Being

The study's findings provide compelling evidence for the effectiveness of neuroscience-based mindfulness training in enhancing mental health and emotional resilience among psychology students. The dual task of relieving mental and promoting well-being is evidenced by the significant reductions in anxiety, stress and depression, together with significant improvements in self-kindness and mindfulness as well as psychological well-being. It is impressive that the average anxiety reduction was 28% because this shows how strong mindfulness practices can be when it comes to understanding cognitive processes underpinning behaviours and rewriting these patterns, especially since some individuals may think they cannot get over their anxiety symptoms. Similarly, the 26% increase in psychological well-being further highlights the program's ability to improve overall life satisfaction and resilience, an essential outcome for most graduate students who will later enter psychology-related professions that can be quite stress-provoking. These findings align with prior research demonstrating the benefits of mindfulness and self-compassion practices for mental health (Kabat-Zinn, 2003; Neff & Germer, 2018). Mindfulness practices reduced participants' emotional

reactivity to stressors by fostering self-awareness and non-judgmental acceptance. Moreover, the significant improvement in self-kindness reflects the potential of self-compassion exercises to counteract self-critical tendencies and promote a supportive inner dialogue.

The interdependence of emotional states and self-compassion traits, as revealed through correlation analysis, emphasizes the holistic nature of the program's impact. For instance, the strong positive correlation between mindfulness and psychological well-being ($r = 0.58$) underscores the transformative role of mindfulness in enhancing emotional resilience and overall quality of life.

For psychology students, the benefits of such training extend beyond personal well-being. By equipping students with practical tools to manage stress and foster resilience, the program enhances their professional readiness to navigate the emotional demands of psychological practice. These skills are especially crucial in wartime or crisis settings, where psychologists are often under high levels of stress. To be effective, educational institutions need to incorporate training based on neuroscience into the psychology curriculum. This structured intervention approach, combining mindfulness practices, lectures on neuroscience, and exercises promoting self-compassion, offers a replicable and scalable model.

Despite its promising findings, the study has limitations that warrant consideration. First, the reliance on self-reported data introduces the potential for response bias. Future research should incorporate objective measures, such as physiological markers (e.g., cortisol levels), to validate these results. Second, the sample size, though sufficient for detecting significant changes, limits the generalizability of the findings. Expanding the study to include more diverse populations would enhance its applicability. Finally, the study assessed only immediate post-intervention outcomes. Longitudinal research is needed to determine the sustainability of the observed improvements.

The findings of this study, alongside its limitations, open several avenues for future investigation. First, further research is needed to explore whether these results are applicable to broader populations, including various age groups and individuals experiencing mental health challenges. Second, conducting long-term follow-up studies could provide insights into the lasting effects of mindfulness interventions on depression, rumination, and trait anxiety. Third, future research should expand the focus to examine mindfulness's influence on a more diverse range of

mental health outcomes and identify the underlying mechanisms through which it exerts its effects. This study offers important evidence on the benefits of brief online mindfulness programs for university students, highlighting their potential to alleviate depression, reduce rumination, and lower trait anxiety. While acknowledging its constraints, this research contributes to the advancement of tailored and effective mental health interventions. In summary, incorporating mindfulness practices into university environments, as suggested by these findings, has the potential to foster not only academic success but also the mental and emotional well-being of students.

Conclusion. This study demonstrates the significant benefits of neuroscience-based mindfulness training in enhancing the mental health and emotional resilience of psychology students. By fostering self-kindness, mindfulness, and psychological well-being, and reducing anxiety, stress, and depression, the program effectively addresses both emotional distress and positive mental health development. These findings emphasize the dual impact of the intervention: alleviating negative emotional states while equipping participants with essential self-regulation and resilience skills.

The program's structured approach, integrating mindfulness practices, neuroscience-informed mini-lectures, and self-compassion exercises, highlights its versatility and applicability in educational settings. For psychology students, such training aligns personal well-being with professional preparedness, enabling them to manage their mental health while navigating the emotional demands of their future careers. Its relevance is particularly acute in crisis settings, such as wartime or disaster contexts, where the need for emotionally resilient mental health professionals is critical.

However, the study's limitations, including its reliance on self-reported data and a relatively small sample size, suggest the need for further research. Future studies should explore the long-term impacts of the program, incorporate objective measures such as physiological biomarkers, and expand to diverse populations to enhance generalizability. Additionally, investigating the mechanisms through which mindfulness and self-compassion exert their effects could provide valuable insights into optimizing these interventions.

By integrating neuroscience-based mindfulness training into psychology curricula, educational institutions have an opportunity to foster

a generation of psychologists better equipped to address the complexities of modern mental health care. This program offers a promising model for bridging the gap between academic preparation and the real-world challenges faced by mental health professionals, contributing to their personal and professional growth.

References

1. Egan, H., O'Hara, M., Cook, A., & Mantzios, M. (2021). Mindfulness, self-compassion, resiliency and wellbeing in higher education: a recipe to increase academic performance. *Journal of Further and Higher Education*, *46*(3), 301–311. https://doi.org/10.1080/0309877X.2021.1912306

2. Shapiro, S., Fitch, A. (2023). Self-Compassion and Mindfulness. In: Finlay-Jones, A., Bluth, K., Neff, K. (eds) *Handbook of Self-Compassion. Mindfulness in Behavioral Health.* Springer, Cham. https://doi.org/10.1007/978-3-031-22348-8_2

3. Barcaccia, B., Medvedev, O.N., Pallini, S. *et al.* (2024). Examining Mental Health Benefits of a Brief Online Mindfulness Intervention: A Randomised Controlled Trial. *Mindfulness* 15, 835–843 https://doi.org/10.1007/s12671-024-02331-8

4. Çağış, Z.G., Yıldırım, M. (2024). Self-Compassion in Students: Theoretical Background, Practices, and Positive Outcomes. In: Arslan, G., Yıldırım, M. (eds) *Handbook of Positive School Psychology. Advances in Mental Health and Addiction*. Springer, Cham. https://doi.org/10.1007/978-3-031-54295-4_4

5. Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A Global Measure of Perceived Stress. *Journal of Health and Social Behavior, 24,* 385-396. http://dx.doi.org/10.2307/2136404

6. Johnson, B.T., Acabchuk, R.L., George, E.A. *et al.* (2023). Mental and Physical Health Impacts of Mindfulness Training for College Undergraduates: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. *Mindfulness, 14,* 2077–2096 https://doi.org/10.1007/s12671-023-02212-6

7. Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: Past, present, and future. *Clinical Psychology: Science and Practice, 10*(2), 144–156. https://doi.org/10.1093/clipsy/bpg016

8. Kostruba, N., Fishchuk, O. (2023). *Psykhichne zdorovia v umovakh kryzy [Mental health in crisis conditions]*. Lutsk: Vezha-Druk https://evnuir.vnu.edu.ua/handle/123456789/23402 [in Ukrainian]

9. Lee, W., McCaw, C. T., & Van Dam, N. T. (2024). Mindfulness in education: Critical debates and pragmatic considerations. *British Educational Research Journal, 50*(4), 2111–2130. https://doi.org/10.1002/berj.3998

10. Martínez-Rubio, D., Navarro-Gil, M., & García-Campayo, J. (2023). Neuroscience-Based Mindfulness Training: A New Approach to Enhance Emotional Regulation. *Mindfulness, 14*(1), 45–58**.** https://doi.org/10.1007/s12671-022-01900-3

11. Neff, K. (2023). Self-Compassion: Theory and Measurement. In: Finlay-Jones, A., Bluth, K., Neff, K. (eds) *Handbook of Self-Compassion. Mindfulness in Behavioral Health*. Springer, Cham. https://doi.org/10.1007/978-3-031-22348-8_1

12. Neff, K. D. (2003). The Development and Validation of a Scale to Measure Self-Compassion. *Self and Identity*, *2*(3), 223–250. https://doi.org/10.1080/15298860309027

13. Neff, K. D., & Germer, C. K. (2018). The Mindful Self-Compassion Workbook: A Proven Way to Accept Yourself, Build Inner Strength, and Thrive. *The Guilford Press*, NY.

14. Pontin, E., Schwannauer, M., Tai, S., & Kinderman, P. (2013). A UK validation of a general measure of subjective well-being: The modified BBC subjective well-being scale (BBC-SWB). *Health and Quality of Life Outcomes, 11*, 150. https://doi.org/10.1186/1477-7525-11-150

15. Saveliuk, N. (2022). Perezhyvannia stresu v umovakh viiny: dosvid ukrainskoho studentstva [Perceptionofthewar-related stress:experience of ukrainian students]. *Psykholohiia: realnist i perspektyvy – Psychology: Reality and perspectives, 18*, 141–152. https://doi.org/10.35619/praprv.v1i18.282 [in Ukrainian]

16. Shapiro, S. L., & Fitch, M. (2023). Self-Compassion and Mindfulness. In A. Finlay-Jones, K. Bluth, & K. Neff (Eds.), *Handbook of Self-Compassion* (pp. 123–140). Springer. DOI: https://doi.org/10.1007/978-3-031-22348-8_7.

17. Tran, Minh Anh Quang & VO-THANH, Tan & Soliman, Mohammad & Ha, Tu Anh & Pham, Manh. (2022). Could mindfulness diminish mental health disorders? The serial mediating role of self-compassion and psychological well-being. *Current Psychology. 43*. https://doi.org/10.1007/s12144-022-03421-3

18. World Health Organization. (2024). WHO 2024 Emergency Appeal: Ukraine. Retrieved from: https://cdn.who.int/media/docs/default-source/documents/emergencies/2024-appeals/2024-who-ukraine-emergency-appeal_en.pdf?sfvrsn=8d480d88_2&download=true [in Ukrainian].

Received: 14.09.2024
Accepted: 03.10.2024