HOW UKRAINIAN UNIVERSITY STUDENTS ACADEMICALLY PROCRASTINATE IN CONDITIONS OF FORCED-ONLINE-LEARNING CAUSED BY THE COVID-19 PANDEMIC AND WARTIME

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*Abstract. This study **aims** to investigate the features of academic procrastination among higher education students in the context of forced online learning caused by the COVID-19 pandemic and wartime in Ukraine. **Methods.** A total of 789 higher education students enrolled in Ukrainian institutions participated in the study, responding to six questionnaires. The research focused on examining the correlation between academic procrastination indicators, self-organization, and the preferred forms of learning during the period of forced online learning. The **results** indicate that forced online learning has a positive impact on the manifestation of academic procrastination among students and does not promote their self-organization. Significantly higher levels of academic procrastination were observed in students who solely studied online compared to those in the mixed format, involving both online and face-to-face learning. Conversely, students in the mixed format exhibited less pronounced indicators of academic procrastination and higher levels of self-organization and conscientiousness. Moreover, the study identified a new type of academic procrastination labeled as "active academic procrastination." Unlike its negative connotation, this type is perceived as a part of the process of forced online learning. In **conclusion**, the research expands the theoretical understanding of academic procrastination among students and sheds light on its manifestation during forced online learning. The findings emphasize the importance of considering the learning format's influence on students' procrastination tendencies and offer insights into fostering better self-organization and motivation in the context of online education during challenging circumstances.*

Keywords: active academic procrastination, higher education students, forced online learning, deadline, COVID-19 pandemic, armed aggression.

1. INTRODUCTION

Transformational processes on a global scale have become increasingly prevalent in recent years, leading to the emergence of phenomena in the noosphere that were previously unimaginable to humanity. This study explores the concept of active academic procrastination in students within the context of higher education during the forced online learning format resulting from unavoidable events (1). The forced online learning is a consequence of quarantine restrictions stemming from the COVID-19 pandemic and armed aggression (2). Existing scientific research on student academic procrastination highlights its potential as a significant obstacle to academic and professional achievement. The negative consequences of academic procrastination extend beyond academic

performance decline, encompassing acute emotional distress, feelings of failure, guilt, and overall dissatisfaction with one's performance.

By examining the relationship between active academic procrastination and forced online learning, this study aims to shed light on the impact of these unprecedented circumstances on students' academic progress and emotional experiences. Understanding these dynamics can lead to the development of strategies and interventions to mitigate the adverse effects of academic procrastination and support students in navigating the challenges of higher education in the face of global transformation and the unique demands of online learning. In numerous studies by scientists such as Dub (2020), Lay (1998), Mikuš (2015), Steel and Klingsieck (2016), Tkachenko & Kosikova (2018), Özberk and Kurtça (2021), Park (2012), Pychyl et al. (2000), Senécal et al. (2003), Steel (2010), Wolters (2003), Ashraf et al.(2019), Talebian et al. (2022), revealed the essence, features of development and manifestations of academic procrastination in students, identified the impact of academic procrastination on students' academic achievements and personal qualities, and identified ways to overcome the negative phenomena caused by academic procrastination.

Procrastination, as a term in psychological science, gained popularity in the latter half of the twentieth century, particularly after the publication of Ringenbach's book "Procrastination in Human Life" and Knaus and Ellis's work on "Overcoming Procrastination." The concept of "academic procrastination" has been extensively studied in psychological research and is often regarded as a subtype of general procrastination with its own variations. Zhu (2014) describes academic procrastination as a deliberate tendency to replace urgent academic tasks with more preferred activities of a different nature. Wolters (2003) identifies one of the factors contributing to academic procrastination as the uncertainty of when to initiate a task. When students have an extended period to complete an assignment, the timing of their decision to start working on it becomes a significant factor in academic procrastination. Notably, some studies have highlighted the impact of academic procrastination on students' personal well-being. Tice and Baumeister (1997) found that occasional instances of academic procrastination might lead to short-term satisfaction, but prolonged manifestations can result in stress and negative consequences.

Based on the analysis of studies (Boymau et al., 2022), it becomes evident that there is currently no universally accepted definition of the term "academic procrastination," including the newly proposed term "active academic procrastination." Hence, we present our own definition: "active academic procrastination" refers to the intentional postponement of necessary and important academic tasks, despite being fully aware of the negative consequences that such delays may entail. This behavior occurs in the context of prolonged stress caused by traumatic and/or post-traumatic experiences stemming from unavoidable living conditions. We posit that active academic procrastination may be linked to the operation of personal defense mechanisms within students' psyche. This procrastination type could serve as a coping strategy, allowing students to shield themselves from distressing emotions or challenging circumstances related to their academic responsibilities.

The definition of "active academic procrastination" brings us closer to revealing the conditions that, in our opinion, determine the manifestation of this phenomenon. This is the long (almost three years) online learning of students, caused first by the quarantine restrictions of the COVID-19 pandemic and later by the armed aggression in Ukraine on February 24, 2022 (Velykodna et al., 2023). As we can see, under the current circumstances, this training is a forced and almost non-alternative option to continue education. The study of the peculiarities of academic procrastination of higher education students in the context of online learning caused by the COVID-19 pandemic and the armed aggression leads us to the need to distinguish the concept of "forced online learning" as an independent phenomenon. Currently, the educational process in Ukrainian higher education institutions is carried out using the following platforms: Moodle, Google Class, Google Hangouts, Microsoft Teams, Skype, Cisco Webex. Students communicate with teachers using mobile applications such as Viber and Telegram, as well as email.

Due to the pandemic caused by the coronavirus infection COVID-19, the life and education of an average Ukrainian student has undergone transformational changes, moving them from the usual interpersonal interaction with others to the plane of "remote", "self-isolation", and "online". The field of education has transformed from face-to-face to online in a short period of time. This, in turn, has led to forced peculiarities in the process of receiving educational services. The first feature is the use of online platforms instead of the usual face-to-face communication to organize the educational process. This has led to a situation of not only inability or misunderstanding of the functioning of certain educational applications or platforms, but also a lack of the necessary technical means to access the latter. In this case, we mean gadgets (smartphones, PCs, tablets, laptops, speakers, and webcams) and the availability and uninterrupted access to high-speed Internet. Another feature that emerged during the forced introduction of online learning was the long hours spent at the laptop, which is not good for students' health. This situation is caused not only by the need to attend classes, but also by the search for information to prepare for them. Various mandatory educational conferences and webinars have joined the main online learning process.

In this study, we use the term "forced online learning" of students, which has not been used in open scientific circulation before. Therefore, we consider it appropriate to briefly describe the idea of online learning in higher education institutions, which has received a positive response within the scientific community and is reflected in a large number of scientific developments. In the course of a thorough analysis of the scientific literature, we have seen a certain discrepancy in the terminology regarding the interpretation of the concept of "online learning", which is often identified by researchers with such phrases as "e learning", "virtual learning", "distance education", "digital learning". In the works of Driscoll (2002), Horton (2000), Rosenberg (2001), the term "e-learning" is identified with the concept of "virtual learning" and is interpreted as any form of learning that involves the use of electronic devices, including learning with the use of computers. Guri-Rosenblit (2005) defines e-learning as the use of electronic media for various learning purposes, which can range from additional features in regular classrooms to the complete replacement of face-to-face meetings with online learning. Alonso et al. (2005) interpret e-learning as the use of new multimedia technologies and the Internet to improve the quality

of educational services by providing access to resources and services that host learning materials, as well as separate exchange and collaboration in the teacher-student system (2005, p. 233).

Thus, we understand the meaning of the concept of "forced online learning" as the only way of obtaining higher education by students under certain living conditions, mediated by electronic devices through the use of various Internet technologies, electronic libraries, teaching materials of various kinds (text, video, audio, etc.) and interaction with the teacher mainly in real time via the Internet, which involves the delivery of educational material to the student as a user of an electronic device, where he or she processes it independently. Under the conditions of forced online learning during martial law in the country can actually enhances the manifestations of academic procrastination. The phenomenology of "forced" is revealed in modern scientific research mainly in relation to social, biological, and physical phenomena (Chamnongthai et al., 2020; Ehrlich et al., 2021; Ergin, de Wit, & Leask, 2019; Nadkarni, Kapoor, & Pathare, 2020; Pancani et al., 2021) and remains open for scientific debate in the fields of psychology and pedagogy. Thus, in 2021, the author of this article conducted a study of forced leadership as a social and psychological phenomenon of professionally successful women with co-authors (Cherepehina et al., 2021). At the same time, we can confidently state that there is a lack of scientific research on the peculiarities of academic procrastination of higher education students in the context of forced online learning due to quarantine restrictions as a result of the COVID-19 pandemic and the armed aggression.

The purpose of this study is to theoretically substantiate and empirically investigate the features of active academic procrastination of higher education students in the conditions of forced online learning during the COVID-19 pandemic and the armed aggression. Conceptual hypothesis: forced online learning contributes to the development of active academic procrastination in higher education students. The conceptual hypothesis is specified in four empirical hypotheses: students who have studied in a blended format have lower indicators of academic procrastination than students who have studied in a forced online mode (1); students who have studied in a blended format have higher indicators of self-organization of activities than students who have studied in a forced online mode (2); students who studied in a blended format have higher indicators of benevolence and conscientiousness than students who studied only online (3); students who studied in a blended format have higher indicators of self-efficacy than students who studied in a forced online mode (4).

2. METHODS

To achieve this goal, a set of methods was used: theoretical: analysis of scientific literature, methods of logical and psychological analysis (classification, systematization, comparison, generalization) to reveal the theoretical foundations of the study of academic procrastination and the peculiarities of the development and manifestation of the latter in higher education students in the context of forced online learning during the COVID-19 pandemic and the armed aggression. Empirical methods:

1. Questionnaire "The degree of procrastination" by Karamushka to determine the degree of academic procrastination (Karamushka et al., 2019).

2. Questionnaire "Academic Procrastination Scale for Students" by Ley, adapted by Garanyan to determine the level of academic procrastination (Shkala prokrastinatsii, Ley).

3. Self-Organization Questionnaire by Fisher and Bond (Yatsenko, 2018).

4. Five-factor personality questionnaire by Costa and McCrae to determine the features of the personality structure.

5. The test for determining the level of self-efficacy by Maddux, Scheer.

6. Methodology for studying the motivation of learning in a higher education institution (Semichenko, 2004).

7. In order to identify the personal characteristics of the respondents, such as age, gender, level of education, specialty, course, attitude to online learning and academic procrastination, we developed a questionnaire.

Research design

In this study, the mixed research method was used. The qualitative research method was used to interpret the data during the experimental study of the impact of forced online learning on the development of active academic procrastination in higher education students. The quantitative research method was employed to determine the effective links between the individual characteristics of students and the conditions of forced online learning.

Research participants

The participants of the study were 789 higher education students who voluntarily took part in the study in 2022-2023 at different levels (bachelor's and master's degrees). We divided the students into two groups: students of the first group (n=236) who received their education in a mixed format (online and face-to-face) and students of the second group (n=553) who received their education exclusively in a forced online learning environment. Of these, 18 students are enrolled in the Dnipro State Medical University (Dnipro, Ukraine), specialty 222 Medicine, field of study Health Care, and 42 are enrolled in the Oles Honchar Dnipro National University (Dnipro, Ukraine), specialty 053 Psychology, field of study Social and Behavioral Sciences, full-time, 729 students are studying at the Municipal Institution of Higher Education "Khortytsia National Training and Rehabilitation Academy" (Zaporizhzhia, Ukraine), of which 71 students are studying in the specialty 053 Psychology at the first (bachelor's) level on a full-time basis, 130 students represent the specialty 016 Special Education at the first (bachelor's) level on a full-time basis, 115 students are studying in the specialty 016 Special Education at the second (master's) level on a full-time basis, 86 students are studying in the specialty 053 Psychology at the first (bachelor's) level on a part-time basis, 29 students are studying in the specialty 053 Psychology at the second (master's) level on a part-time basis, 145 students are studying in the specialty 016 Special Education at the first (bachelor's) level on a part-time basis, 153 students are studying in the specialty 016 Special Education on a second (master's) level. The study was conducted individually with each higher education student via video communication on the Zoom platform and using electronic forms of methodological tools. The sample was formed in such a way that half of the higher education applicants received educational services in a mixed format (online learning and face-to-face learning), and the other half received educational services in the online learning format.

Research instruments and procedures

The study consisted of 3 stages.

The first stage. At the beginning of the study, a questionnaire was conducted to identify the personal data of the subjects mentioned above, as well as the attitude of the subjects to forced online learning and academic procrastination in such conditions.

The second stage. As a result of the primary processing of the test results of the subjects, the average values of the questionnaire "Degree of Procrastination", the questionnaire of self-organization of activity by Fisher, Bond in the adaptation of Mandrykova, the five-factor personality questionnaire by McCrae and Costa, in the adaptation of Orl and Senin, the methodology for studying the motivation of learning in a higher education institution were determined.

The third stage. Establishing correlations between indicators of academic procrastination and forms of learning during the period of forced online learning, establishing differences between students, whom we divided into two conditional groups: those who received educational services in a mixed format (online learning and face-to-face learning) and those who received educational services only in the format of online learning. The methodology for studying the motivation to study in a higher education institution was used to establish differences between the two distinct groups of students in terms of self-efficacy in the areas of subject activity and interpersonal communication by Maddux, Scheer, adapted by Boyarintseva. Boyarintseva, establishing differences between students of the first and second groups according to the five-factor personality questionnaire of McCrae and Costa, establishing differences between students of the first and second groups according to the questionnaire of self-organization of activity by Fisher and Bond, establishing differences between students of the first and second groups on the scale of academic procrastination by Lei, adapted by Garanyan, establishing differences between students of the first and second groups on the questionnaire "Degree of procrastination".

Data Analysis

The test results were calculated automatically using the mathematical statistical method: the differences between the indicators of the results were identified using the Mann-Whitney U test, and the correlations between the indicators were established using the Spearman test. The integrative analysis package SPSS 22.0 was used to process and analyze the data. The collected data was analyzed, compared and interpreted.

3. RESULTS

Our study's results revealed that among students who received educational services in a mixed format during the pandemic, referred to as "the first" group (combining forced online learning and face-to-face learning), 72.2% expressed their dissatisfaction with online learning. They cited the lack of live communication with teachers and classmates as a major drawback, even in light of potential risks associated with face-to-face attendance. On the other hand, 27.8% of students in this group reported being satisfied with the introduction of online learning. For them, the benefits of minimizing the risk of contracting COVID-19 and protection from the uncertainties of war outweighed the limitations of reduced face-to-face interactions.

In contrast, in the "second" group (comprising students undergoing forced online learning exclusively), 54.8% of respondents stated their dislike for online learning. They considered it a necessity rather than a preference, as various gadget-related problems hindered their ability to fully assimilate educational material. Conversely, 45.2% of the respondents in this group had a positive attitude towards forced online learning. They appreciated its convenience, including saving time on commuting to the university, the absence of direct communication with teachers and classmates, and the perception of a safer learning environment.

In the first group, 16.7% of students admitted that during classes in the forced online format, they pretended to be present while doing other things, such as turning off the sound or camera. In contrast, a higher percentage (64.2%) of students in the second group reported engaging in similar behavior, stating that the class was uninteresting, but attendance was mandatory. Regarding academic performance, approximately 83.3% of students in the first group noted that their academic performance remained at about the same level as before the forced online learning began. However, in the second group, 40.5% of respondents mentioned that their academic performance indicators decreased under the conditions of forced online learning. When it comes to preparing for classes, 55.6% of students in the first group reported spending roughly the same amount of time as they did during in-person learning. For the students in the second group, 54.8% noted that the time spent preparing for classes in online learning remained consistent. Interestingly, 71.7% of respondents believe that forced online learning has a negative impact on the quality of educational services, but it has a positive effect on their emotional state due to the increased sense of security it provides.

Based on the findings from the next block of the questionnaire, which aimed to identify the characteristics of academic procrastination in the context of forced online learning, it was observed that 16.7% of the students in the first group admitted to not preparing for classes and relied on the first electronic source from the browser when answering questions. In the combined study group of students from both the first and second groups, 73.8% of students in the online learning environment demonstrated a tendency to be lazy in preparing for classes and utilized unverified information, resorting to opening the first link in the browser when answering questions.

In the study group of students from the first group, 11.1% admitted to using auxiliary means when taking knowledge assessments in the forced online learning format. On the other hand, among students in the second group, a higher percentage (69.1%) used additional means like browser search engines or sought help from friends during knowledge assessments (quizzes, tests, exams). They explained their behavior by citing a lack of moral strength to resist the temptation or technical limitations, such as inadequate lighting or Internet access, as reasons for relying on these means. Furthermore, 16.7% of students in the first group mentioned that they had to postpone an important academic task until the deadline. However, all students in the first group reported that their desire to postpone academic tasks did not increase compared to their usual study habits during the pre-digital and pre-war periods, despite the shift to forced online learning.

In the study group of students from the second group, a considerable 66.6% admitted to postponing important academic tasks until the last moment of their submission.

Additionally, 26.2% of students in the second group reported an increased desire to procrastinate on academic tasks due to the home environment lacking stimulation for learning activities. Moreover, fear for their lives and the lives of their loved ones during the challenging times of forced online learning prevented them from fully focusing on their studies. Comparatively, 5.6% of students in the first group acknowledged being active procrastinators in their studies both before and after the quarantine restrictions and the onset of the full-scale invasion. However, in the study group of students from the second group, this figure was significantly higher, reaching 52.3%. Thus, it can be observed that the students in the first group demonstrated a higher level of responsibility for their learning activities, even in the conditions of forced online learning, compared to students in the second group. Following the primary processing of the indicators, the average scores on the "The degree of procrastination" questionnaire by Kiselyova were determined for both groups of students, as shown in Figure 1.
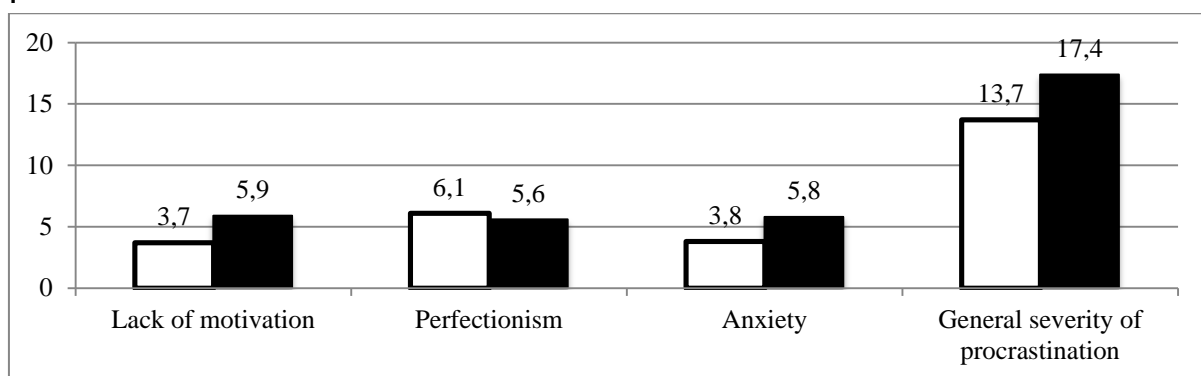

Figure 1. The average scores of the studied groups of students on the scales of the questionnaire "Degree of Procrastination" (white indicates students of the first group, black - the second)

The results obtained from the study indicate that students who studied in a mixed format (combining face-to-face and forced online learning) demonstrated higher scores on the perfectionism scale. This may be attributed to the phenomenon of social desirability, where students may feel the need to present themselves in a favorable light before their teachers during in-person interactions. On the other hand, students who received their education exclusively in the format of forced online learning showed more pronounced average scores in terms of the general degree of procrastination and its components, such as lack of motivation and anxiety. The absence of face-to-face communication and the challenges associated with forced online learning may contribute to these higher levels of academic procrastination in this group. Based on the academic procrastination scale by Lei, the first group of students obtained an average numerical indicator for the general degree of academic procrastination, with a value of 48.8, corresponding to an average level. In contrast, the second group of students scored higher on this scale, with an average indicator corresponding to a high level and having a value of 66.5. These findings underscore the impact of learning format on students' procrastination tendencies and perfectionism levels. It highlights the significance of addressing the unique challenges

posed by forced online learning and fostering a supportive learning environment to help students effectively manage their academic responsibilities and reduce procrastination tendencies.
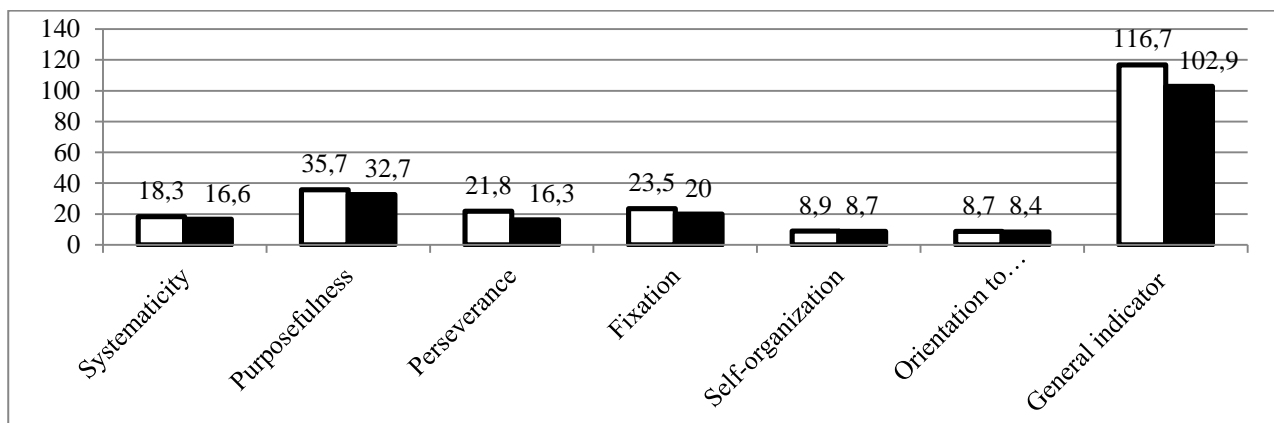

Figure 2. Average indicators of the studied groups of students according to the self-organization questionnaire by Fisher and Bond (white indicates students of the first group, black - the second)

Based on the self-organization questionnaire by Fisher and Bond, the average values on the scales shown in Figure 2 were established for the studied groups of students. The results indicate that students in the first group show a higher inclination towards structuring and comprehending time, indicating better self-organization skills compared to the second group. Furthermore, according to the five-factor personality questionnaire by McCrae and Costa, the average scores on the scales of benevolence, conscientiousness, neuroticism, and openness to new experiences for the students in the first group correspond to a high level. Additionally, the average scores on the extraversion scale are at an average level. Notably, this group of respondents also exhibits a high score on the personality trait of conscientiousness, which implies traits like responsibility, obligation, accuracy, and neatness in their approach to tasks and activities (refer to Fig. 3).
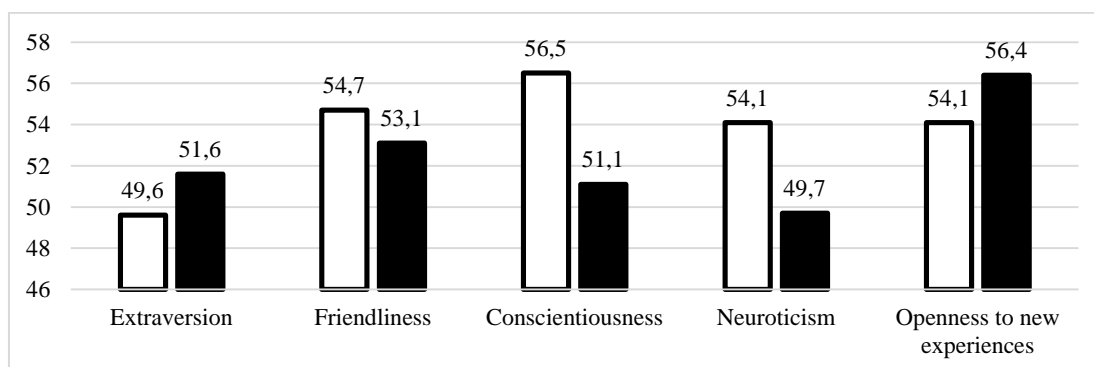

Figure 3. Average scores of the studied groups of students according to the five-factor personality questionnaire by McCrae and Costa (white indicates students of the first group, black - the second)

In the study group of students from the second group, the average scores on the scales of extraversion, friendliness, conscientiousness, and openness to new experiences are at a high level, while the neuroticism scale corresponds to the average level. It is noteworthy that students who received education exclusively in the forced online learning format displayed a more pronounced personal trait of openness to new experiences, indicating a greater interest in exploring different aspects of life and satisfying their own interests. Additionally, based on the test determining the level of self-efficacy by Maddux and Scheer, we found that in the study group of students who underwent education in the mixed learning format, the average indicators on the scale of self-efficacy in the field of subject activity had a numerical value of 23.7, while on the scale of self-efficacy in the field of communication, it was 10.2. Conversely, in the second group of students, the average scores on the scale of self-efficacy in the field of subject activity had a numerical value of 23.9, and on the scale of self-efficacy in the field of communication, it was 10.1. The results obtained in both groups indicate an objective assessment of their own potential in these areas of life. Moreover, according to the methodology of studying the motivation to study in a higher education institution by Ilyin, the average indicators in the studied groups of students who receive higher education in different specialties are shown in Figure 4.
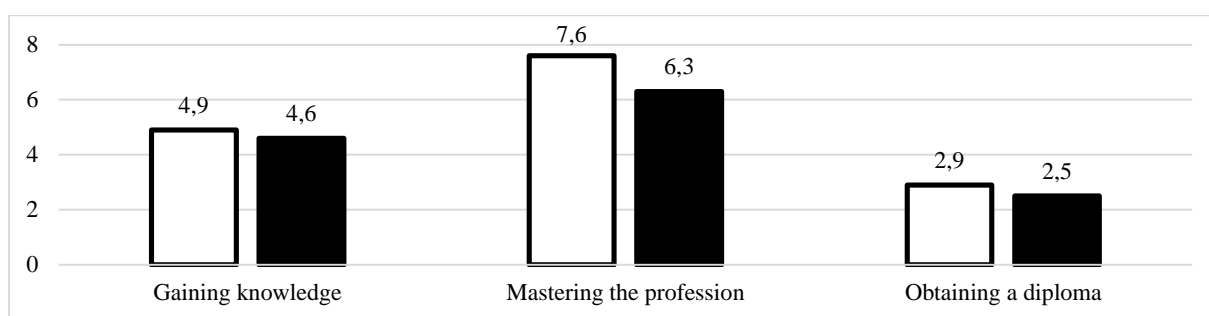

Figure 4. Average indicators of the studied groups of students according to the methodology of studying the motivation to study at a higher education institution (white indicates students of the first group, black - the second)

The obtained results give grounds to assert that the studied groups of students equally strive to acquire knowledge during the period of study at a higher education institution and to obtain a diploma upon its completion. At the same time, the study group of students of the first group recorded higher average values on the scale of mastering the profession.

In order to test the hypotheses formulated at the beginning of the study, the first stage of empirical data processing was to establish differences between the scale indicators in the selected groups of the studied higher education students who, during the period of forced online learning, received educational services in higher education institutions through two different forms of education: mixed (online learning and face-to-face learning) and distance (online). The comparison of the obtained indicators was carried out using the Mann-Whitney U test, since the number of studied higher education students in the formed groups has different numerical indicators. According to the questionnaire "The degree of procrastination" in the two groups of students studied, differences were found, which are presented in Table 1.

Table 1. Differences between students of the two groups according to the questionnaire "The degree of procrastination"

Indicators by scales	Mean values by groups		Mann-Whitney U-test values
	Students of the first group (n=236)	Students of the second group (n=553)	
Lack of motivation	21,58	34,32	217**
Perfectionism	33,00	29,43	333
Anxiety	22,33	34,00	231*
General indicator of procrastination	21,89	34,19	223*

Notes. * - statistically significant differences at the level of p ≤ 0.05
** - statistically significant differences at the level of p ≤ 0.01

Based on the results obtained, we can conclude that statistically significant differences in the two groups of students were found on such scales as the overall procrastination rate (U=223, p=0.012), lack of motivation (U=217, p=0.008) and anxiety (U=231, p=0.016). The obtained indicators suggest that students who studied in a forced online format during the pandemic caused by the coronavirus infection COVID-19 and the armed aggression have higher rates of procrastination and its components such as lack of motivation and anxiety.

Now, let's focus on the differences observed in the identified groups of students concerning academic procrastination, as measured by the Lay scale (Table 2). The results demonstrate statistically significant differences in the scale of academic procrastination (U=40, p=0.000), with higher average values in the second group of students. This indicates that students in the second group are more prone to postponing the completion of urgent and relevant academic tasks of various kinds until the deadline. Such procrastination tendencies can ultimately have negative consequences not only in terms of academic performance but may also lead to potential expulsion due to failure to meet the curriculum requirements.

Table 2. Differences between students of the first and second groups on the scale of academic procrastination by Lei

Indicators by scales	Mean values by groups		Mann-Whitney U-test values
	Students of the first group (n=236)	Students of the second group (n=553)	
Level of academic procrastination	11,72	38,55	40*

Notes. * - statistically significant differences at the level of p ≤ 0.01

Thus, based on the statistically significant differences in the indicators questionnaire and Lei's scale, we can state that the first empirical hypothesis that students who studied in a mixed format during the pandemic have lower rates of academic procrastination than students who studied in a forced online mode has been confirmed.

Next, we will analyze the differences in the indicators of the studied groups of students based on the self-organization of activity questionnaire by Fisher and Bond (Table 3). The results reveal statistically significant differences in the indicators of several scales, including purposefulness (U=249, p=0.037), perseverance (U=213, p=0.008), fixation (U=250, p=0.039), and the general indicator of self-organization (U=245, p=0.032). The average values of these scales are higher in the studied group of students from the first group.

Table 3. Differences between students of the first and second groups according to the self-organization questionnaire by Fisher and Bond

Indicators by scales	Mean values by groups		Mann-Whitney U-test values
	Students of the first group (n=236)	Students of the second group (n=553)	
Systematicity	34,25	28,89	310,5
Purposefulness	37,67	27,43	249*
Perseverance	39,64	26,58	213,5**
Fixation	37,61	27,45	250*
Self-organization	29,36	30,99	357
Orientation to the present	30,94	30,31	370
General indicator of self-organization of activity	37,89	27,33	245*

Notes. * - statistically significant differences at the level of p ≤ 0.05
** - statistically significant differences at the level of p ≤ 0.01

As evident from the results, students who studied in a mixed format during the period of forced online learning displayed notable characteristics, including the ability to concentrate on their goals, a tendency to exert volitional efforts to complete tasks, and effective organization of activities. Additionally, they demonstrated a propensity to adhere to planned structures for organizing events in time and a commitment to maintaining a clear schedule with rigid planning. Consequently, the second empirical hypothesis, suggesting that students who studied in a blended format have higher levels of self-organization compared to students in a forced online mode, was confirmed.

In regard to the five-factor personality questionnaire by McCrae and Costa, statistically significant differences were observed in the personality trait of conscientiousness (U=238.5, p=0.021), as presented in Table 4.

Table 4. Differences between students on the five-factor personality questionnaire by McCrae and Costa

Indicators by scales	Mean values by groups		Mann-Whitney U-test values
	Students of the first group (n=236)	Students of the second group (n=553)	
Extraversion	26,67	32,14	309
Agreeableness	33,14	29,37	330,5
Conscientiousness	38,25	27,18	238,5*
Neuroticism	34,86	28,64	300
Openness to new experiences	25,36	32,70	285,5

Notes. * - statistically significant differences at the level of $p \leq 0.05$

The obtained results indicate that students in the first group demonstrate more pronounced conscientiousness, characterized by traits such as responsibility, obligation, and accuracy in their work. These individuals tend to seek order and comfort, show perseverance in their tasks, and typically achieve good results. These results can be attributed to the specific conditions in which the subjects were placed during the blended learning format. Regarding the third empirical hypothesis, which posited that students who studied in a blended format would have higher indicators of benevolence and conscientiousness than students in the forced online learning format, it was partially confirmed. While statistically significant differences were found in terms of conscientiousness, no such differences were observed concerning the personality trait of benevolence between the two study groups. Moreover, based on the scale of self-efficacy in the field of subject activity and interpersonal communication by Maddux and Scheer, no statistically significant differences were found in the indicators of both study groups, as shown in Table 5.

Table 5. Differences between the students of the studied groups in terms of self-efficacy in the areas of subject activity and interpersonal communication by Maddux

Indicators by scales	Mean values by groups		Mann-Whitney U-test values
	Students of the first group (n=236)	Students of the second group (n=553)	
Self-efficacy in the field of subject activity	31,33	30,14	363
Self-efficacy in the field of interpersonal communication	28,81	31,23	347,5

As we can see, the fourth empirical hypothesis that students who studied in a blended format have higher self-efficacy scores than students who studied exclusively in the forced online learning mode was not confirmed. According to the methodology of

studying the motivation to study at the Taras Shevchenko National University of Kyiv, the results are presented in Table 6.

Table 6. Differences between students who studied in a mixed format and exclusively in the format of forced online learning according to the methodology for studying learning motivation in the higher education institution

Indicators by scales	Mean values by groups		Mann-Whitney U-test values
	Students of the first group (n=236)	Students of the second group (n=553)	
Mastering the profession	38,78	26,95	229*
Acquisition of knowledge	32,17	29,79	348
Obtaining a diploma	31,67	30,0	357

Notes. * - statistically significant differences at the level of $p \le 0.05$

The results obtained provide sufficient evidence to assert that statistically significant differences exist between the formed groups of students who studied in different formats, particularly on the scale of mastering the profession (U=229.5, p=0.016). The highest average scores were observed in the group of students from the first group. This suggests that students who studied in a blended format display a more pronounced desire to master professional knowledge and develop professionally important qualities compared to their counterparts in the forced online learning format. Furthermore, to explore the relationship between the indicators of academic procrastination, self-organization, and the forms of learning during the period of forced online learning, we analyzed the correlation results, which are presented in Table 7. The correlations between the indicators were determined using Spearman's r-criterion.

Table 7. Establishing correlations between academic procrastination indicators and forms of education during the period of quarantine restrictions

Indicators by scales	Forms of education during the pandemic and armed aggression
Level of academic procrastination	0,711**
General indicator of self-organization of activity	-0,279*

Notes. * - statistically significant differences at the level of $p \le 0.05$
      ** - statistically significant differences at the level of $p \le 0.01$

4. DISCUSSION

The main purpose of this study is to investigate the peculiarities of academic procrastination of higher education students in the conditions of forced online learning caused by the COVID-19 pandemic and the armed aggression. The obtained results suggest that the conditions of forced online learning are statistically significantly positively correlated with the level of academic procrastination and allow establishing a statistically significant negative correlation with the overall indicator of students' self-organization. Thus, forced online learning has a positive effect on the development of active academic procrastination in higher education students and does not contribute to the self-organization of the latter. The conceptual hypothesis formulated at the beginning of the study, which is based on the assumption that forced online learning contributes to the development of active academic procrastination in higher education students, was generally confirmed.

We agree with Rahimi & Hall (2021) that it is reasonable to pay attention to the fact that undergraduate students show a higher prevalence of academic procrastination than master's students. An analysis of the core components of academic procrastination found different components for undergraduate and graduate students, including fear of failure and task aversion for undergraduates, and fear of failure and lack of perseverance for graduate students (Rahimi & Hall, 2021). The results of the study by Cjuno et al. (2022), which show that increased levels of academic procrastination increase suicidal thoughts in students during a pandemic and require the development of appropriate actions to prevent this problem in education and health care, correlate with our findings on the prospects for further research. Thus, the decline in indicators of self-organization, benevolence, conscientiousness and self-efficacy of students due to academic procrastination requires the development of psychological measures to prevent academic procrastination or reduce its manifestations during forced online learning (Cjuno et al., 2022).

Our study was based on Azizah and Ruhaena's (2022) assumption that the consequence of distance learning caused by the Covid-19 events is learning difficulties and decreased learning motivation. In this sense, we consider procrastination as part of the process of forced online learning, rather than as a manifestation of laziness or disinterest in the educational process.

We were surprised by the results that personal indicators of benevolence, conscientiousness, and self-efficacy do not depend on the conditions of forced studying. That is, under quarantine restrictions and martial law, higher education students did not become less or more friendly, less or more conscientious, and the conditions of forced online learning did not affect the self-efficacy of the studied students. We can explain this by factors that we did not investigate in this study, such as protective psychological mechanisms and stressful reactions to living conditions. However, if we look at research on academic procrastination outside of online learning and forced learning, Rad et al. (2023) argue that academic procrastination is a form of self-regulatory failure that can have significant negative consequences for individuals. This study shows that mindfulness can be beneficial for self-regulation and that procrastination is associated with low levels of mindfulness.

Currently, the absence of openly available research on the relationship between academic procrastination and online learning as a form of organizing the educational process, and even more so the absence of the concept of "forced online learning", allows us to focus on discussing the results obtained not on comparing them with existing results, but on formulating what questions our study has raised. Thus, we have opened up for scientific debate, firstly, the issues of academic procrastination as one of the mechanisms of psychological protection of higher education students in the context of quarantine restrictions and war, and secondly, the issues of psychoprophylaxis and psychocorrection of emotional states accompanying procrastination in the context of forced online learning, such as stress, depression, aggression, apathy, decreased volitional control, etc.

Based on the study, we can formulate the following recommendations for educators. Firstly, to pay attention to the fact that academic procrastination in the conditions of forced online learning can be part of the process of being in difficult life circumstances, and not a lack of volitional efforts of higher education students or a manifestation of a decrease in motivation to learn. Secondly, in the context of forced online learning, it is necessary to develop measures to stimulate students' self-organization and psychological support. Thirdly, it is important to pay attention to the psycho-emotional state of teachers who are frequently forced to take on the new roles, such as of a 'tutor' and a 'crisis counselor' (Velykodna et al., 2023).

Implications for research and practice, based on the results obtained, may be as follows. First, organizers of the educational process in higher education in the context of forced online learning need to adjust the requirements for higher education students, based on the fact that students' conscientiousness, which is manifested as responsibility, obligation and accuracy in their affairs, is significantly reduced. Therefore, students cannot be blamed for procrastination, but only for taking into account its manifestations and not overloading the learning process with tasks, paying attention to strengthening psychological contact and support for students.

5. CONCLUSIONS

The empirical study aimed at determining the psychological characteristics of active academic procrastination of higher education students in the conditions of forced online learning has established the following: students who received educational services in a mixed format (online and face-to-face learning) have less pronounced indicators of academic procrastination and more pronounced self-organization and conscientiousness. Students who received educational services in the format of forced online learning have more pronounced indicators of academic procrastination, lack of motivation and anxiety. The findings suggest that the study confirmed two hypotheses, including the following: students who studied in a blended format during the pandemic and the armed aggression have lower rates of academic procrastination than students who studied in a forced online mode. Students who studied in a blended format have higher rates of self-organization than students who studied in a forced online mode. At the same time, it should be noted that the third empirical hypothesis, based on the statement that students who studied in a mixed format during the pandemic have higher indicators of goodwill and conscientiousness than students who studied in a forced online mode, was partially

confirmed, as there were no statistically significant differences in terms of goodwill. The fourth empirical hypothesis of the study, that students who studied in a mixed format during the pandemic and the armed aggression have higher self-efficacy scores than students who studied in a forced online mode, was not confirmed, as no statistically significant differences were found during the processing of the indicators.

In order to determine the relationship between the indicators of academic procrastination, self-organization and forms of education during the period of quarantine restrictions caused by the pandemic caused by the coronavirus infection COVID-19 and the armed aggression, a correlation analysis was conducted, which determined that forced online learning has a positive effect on the development of active academic procrastination in higher education students and does not contribute to the self-organization of the latter.

Based on the results of our research, we can conclude that academic procrastination is inherent in all students and cannot be considered a negative phenomenon. The study allowed us to identify a special type of procrastination, "active academic procrastination," which cannot be considered the result of poor study skills, disorganization, forgetfulness, and general behavioral rigidity. In our opinion, it is part of the process of forced online learning. At the same time, we have determined that the consequences of active academic procrastination can be a decrease in students' self-organization, friendliness, and self-efficacy.

Although in general, our results are consistent with the traditional understanding of the nature and manifestations of academic procrastination, there is still a conceptual difference. Thus, in the context of online learning, forced first by quarantine restrictions and two years later by the war, the concept of academic procrastination takes on a different meaning. Therefore, we have expanded and clarified the content of the concept of "academic procrastination" and proposed the term "active academic procrastination" as a result of obtaining higher education in the conditions of forced online learning. For the first time in our study, the concept of "forced online learning" is used, its content is revealed and the expediency of such use is proved.

We have found that the authors, independently of each other, created their own interpretations of the concept of academic procrastination, depending on the aspect of their research; that in the scientific community we can observe the substitution of the primary concept of "procrastination", which has an English etymology, with such synonymous words as "delay", "evasion", "postponement" or its identification with negative phenomena. We have expanded the idea of academic procrastination without using it in a negative connotation. Thus, we assume that although academic procrastination leads to a decrease in students' self-organization, friendliness, and self-efficacy, it is not a negative phenomenon, but part of the process of forced online learning caused by the combination in time and space of two inevitable phenomena that are existentially significant for higher education students and have a psychotraumatic effect on them, namely: first, from 2020, the quarantine restrictions of the COVID-19 pandemic and, from 2022, the armed aggression. Thus, we have fulfilled the tasks set at the beginning.

Regarding the prospects for further research, we consider it important to develop psychological recommendations for teachers on the psychological correction of academic procrastination of higher education students in the context of forced online learning. It can

be noted that this problem is relevant not only within psychological science but also in practice. Therefore, it is worth studying it more deeply, namely, to expand the sample, to study other age categories, areas of student training, for example, to compare the peculiarities of academic procrastination in students of humanities and technical specialties in the conditions of forced online learning. We consider the phenomena of "forced" associated with the educational process to be open for further research; disclosure of the psychological content of academic procrastination as one of the manifestations of defense mechanisms in conditions of prolonged stress and difficult life circumstances; determination of which personal qualities influence the manifestations of academic procrastination of higher education students.

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Conflict of interest

The authors declare that they have no conflict of interest.