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Procrastination, stress and academic performance in students

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Abstract

As postponing action strategy, for the last moment the procrastination is one of the factors causing the problems in study. The objective of the study is identification of links between indicators of academic procrastination, stressors, responses to stressors and academic achievements. The research was implemented on the base of sample which amounted 435 from 17 to 25 years old (M age = 19,03). The comparative procrastination analysis among groups of students with different levels of academic performance has shown that student with low level of achievement are inclined to more often suffer from procrastination, be lazy impulsively make a decision during the establishing of their personal time, care frustration, stress and anger. The correlation analysis data allow for the conclusion that a high level of procrastination is related to stress and academic failure. The analyse of links between procrastinations and stressors, and also reactions on it among students has shown that the higher the social anxiety, failure avoidance, procrastination frequency, lazy, worse perfectionism and impulsive, the higher he values all stressors and impressive of reactions on it. In this way, academic procrastination impedes the effectiveness of student study, effects on performance, contributes to stress, that undoubtedly impacts on professional development of future specialists.

Keywords: procrastination, stress, stress reactions, academic performance, students.

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Introduction

Academic procrastination, which represents the intentional delay in the completion of activities, projects, and exam preparation, is quite common among students. According to various estimates, between half and 90 % of college and university students prone to this behavior and the prevalence of this phenomenon rises (Chehrzad et al., 2017). Researchers and practitioners note that academic procrastination leads to negative consequences on student's academic progress and well-being (Kim, Seo, 2015). All this is a source of growing interest of researchers in the problem of academic procrastination.

The relevance of this work consists in the fact that in modern society there is an increasing number of students who procrastinate in the learning process and suffer from a tendency to defer things until a later time. At the same time, there is no task-oriented clarification of the link between academic performance, student stress and procrastination. In this regard, it is important to remember that this procrastination in college has a negative impact on the professional development of future specialists.

Purpose and objectives of the study

The purpose of this study is to analyze the links between procrastination, stress level, response to stressors, and academic performance. The main objectives of this study are: analyzing the interaction of procrastination, student stress and academic performance; determination of the severity of the components of procrastination and stress in students with different academic achievements. The subject of the study is the relationship between procrastination, stressors, responses to stressors, and academic performance. The following hypotheses were tested: procrastination is positively associated with stress; low-performing students are more likely to procrastinate and have stress.

Literature review

Text Procrastination is a stable disposition expressed in a person's tendency to delay the completion of actions at a later time, which leads to negative experiences and an unfavorable outcome. Procrastination differs from planned postponement in that it is unscheduled and actually means delaying things that were planned. Procrastination, usually occurs when one activity is unnecessarily delayed, and individuals experience extremely severe agitation when they start thinking about it. With regard to various emotional, cognitive, and behavioral factors of procrastination, different types of procrastination have been mentioned, including academic procrastination, neurotic procrastination, compulsive procrastination, decisional procrastination, among which academic procrastination comes out top.

Researchers note that procrastination is widespread among students, approximately 70–90% of students procrastinate (Chehrzad et al., 2017). In this regard, academic procrastination is widely disseminated, implying a delay in the implementation of tasks, disorganization, absent-mindedness and general behavioral rigidity. Procrastination is associated with the type of task. For example, research shows that boring and difficult tasks are more likely to be postponed. The irrational distribution of time and resources by students leads to the fact that they experience serious difficulties in organizing their own learning process: it is hard for them to control the intermediate and final learning outcomes at the university, which significantly worsens the quality of education, thereby complicating personal and professional self-realization.

According to the research data of A.V. Miklyaeva et al. (2018), the prevalence of academic procrastination in the student environment is associated with a lack of interest in completing academic assignments, which is especially typical for humanists (in comparison with students of technical and natural science universities) as well as with impulsiveness, provoking the ease of switching from educational tasks to extracurricular ones, which is more characteristic of students of humanitarian specialties (Miklyaeva et al., 2018). Symptoms of academic procrastination include poor sleep, high levels of stress, delayed work due to lack of time, improper completion of homework, confusion, self-blame, feelings of guilt and inadequacy, low self-esteem, anxiety, and depression (Custer, 2018).

In the view of A.M. Ilchenko, an increased level of procrastination among students is manifested in connection with the fact that adolescents choose the activity that brings them more pleasure at a given point in time and does not cause any inconvenience or stress. According to the author, the fear of estimation, low motivation for achievement does not allow the student to engage in activities in more detail, "bring" the object of activity to "perfection" (Ilchenko, 2017).

There are some studies devoted to the creation of a conceptual model of procrastination (Garanyan et al., 2009). Thus, the authors consider procrastination as a result of the interaction of personality factors, task factors and time factors (mood, ego resources, and the presence of other more interesting activities).

Studies have shown that people who procrastinate experience more stress than those who do not procrastinate, and their performance is lower (Seaward, 2011). It has been noted that procrastination is associated with decision making and unease, depression and anxiety (Goff, 2011). Stress is the feeling that a person experiences when they estimate that the situation demands exceed their personal and social resources. Stress is a natural reaction in case of real or imagined danger, intended to protect a person. Stress can be useful up to a certain point because it motivates people to overcome obstacles and develop.

At the same time, after a certain point, stress becomes harmful to health, relationships, and quality of life (Clinciu, Cazan, 2014).

The impact of stress on learning is important in education because it potentially interferes with student learning (Kuftyak, Samokhvalova, 2015). It has been established that students tend to experience stress due to the following factors: heavy academic workload, poor grades, insufficient preparation for classes, inability to properly organize their daily routine, lack of time, disappointment in the future profession, combining work and study, financial problems, fear of the future (Seaward, 2011).

So, for example, pursuing a degree (such as medical) can be stressful for students and can negatively affect their emotional well-being and academic performance (Goff, 2011). Akgun and Ciarrochi (2003) showed that academic stress is negatively associated with academic performance. Moreover, higher perceived stress was significantly correlated with lower performance. Another study has shown that stress causes a high student dropout rate (Clinciu, Cazan, 2014). Although a number of studies have found a limited linkage between stress and academic performance, the conventional wisdom is that stress does have an unfavorable effect on academic performance (Goff, 2011).

A cross-cultural study of academic stress found differences in the level of stress experienced by students from four countries – China, Japan, Korea, and the USA (Zhao et al., 2009). It was found that almost the majority (86.6%) of Chinese students experience high levels of stress, while only two-thirds (67%) of American students are exposed to this level of stress. According to the researchers, Chinese cultural characteristics and mentality have a dominant influence on students in regard to determining the future employment and social status.

However, many authors emphasize that stress also has a positive effect on the subject (Seaward, 2011), providing a stimulating, mobilizing and inspiring effect. C. Aldwin (1994) believes that stress can serve as a boon for the psychosocial development of the subject.

Thus, the study of the effects of academic procrastination on the mental state and academic performance of students evidently requires additional study.

Methodology

To achieve the defined objectives, the following methodological tools were used:

Procrastination Assessment Scale – Students adapted by M. V. Zvereva (2015).

The Procrastination Assessment Scale for Students (PASS; Solomon, Rothblum, 1984) is a commonly used measure of academic procrastination that was designed to assess procrastination in two different areas: "frequency of procrastination," which measures how often students procrastinate on various academic tasks, and "reasons for procrastination," which assesses a variety of different motives for engaging in procrastination. It includes the following scales: frequency of procrastination, social anxiety, laziness, challenge, poor perfectionism, organization, avoidance of failure, impulsivity, and self-control.

The level of stress in students and reactions to stressors were assessed using the Student-life Stress Inventory adapted by E. V. Kuftyak, A. A. Bekhter, S. A. Kirpan (2020). The method includes two scales of stress and response to stressors. The Stress scale consists of five subscales: frustration, conflict, pressure, change, intrusion. The Stressor Response scale includes four subscales: physiological assessment, emotional assessment, behavioral assessment, and cognitive assessment.

The sample size was 435 students aged 17 to 25 years (M = 19.03, SD = 1.98), both women and men. Participants are students of universities in Moscow, Samara, Nizhny Novgorod and other cities. Students were asked to voluntarily complete an online questionnaire on the Google Forms platform, which included the above mentioned methods.

Mathematical processing of the obtained data was carried out using "SPSS 17.0". The following indicators were determined: arithmetic mean (M), mean square deviation. The significance of differences in the obtained results was assessed using the Mann-Whitney U-test for independent samples. The correlation between the two indicators was established using the Spearman's rank-order correlation coefficient.

Results

Two groups of students were identified based on the analysis of the last-semester average grade: low-performing students (a satisfactory level of academic performance) and high-performing students (those who get 'good' and 'excellent' grades).

Afterwards, the level of procrastination and stress in students with different academic performance was compared.

Differences in life satisfaction between groups of students showed that low-performing students have a higher incidence of procrastination (p≤0.01). In comparison with successful students, the following causes of procrastination are more pronounced in low-performing students: laziness (p≤0.01) and poor perfectionism (p≤0.05).

Low-performing students are more likely to avoid failure ($p \leq 0.05$) and are more impulsive ($p \leq 0.05$), while academically successful students are more disciplined ($p \leq 0.01$) and self-controlled ($p \leq 0.01$).

Table 1. Indicators of academic procrastination in students with different levels of academic performance.

Scale	Low-performing students (n = 183)		High-performing students (n = 252)		p
	M	SD	M	SD	
Frequency of procrastination	22,07	4,676	19,93	5,716	0,000***
Social anxiety	2,90	0,892	2,85	0,989	
Laziness	3,59	0,810	3,23	0,973	0,000***
Challenge	2,16	0,934	2,04	0,953	
Poor perfectionism	2,32	0,876	2,13	0,853	0,023*
Organization	2,43	0,944	2,91	0,968	0,000***
Avoidance of failure	3,88	0,717	3,74	0,750	0,046*
Impulsivity	3,30	0,927	3,11	0,898	0,034*
Self-control	3,64	0,626	4,00	0,730	0,000***

Note: *$p < .05$; **$p < .01$; ***$p < .001$.

The analysis of parameters of stress and response to it depending on the academic record showed statistically significant differences in such indicators as frustration ($p \leq 0.05$), conflict ($p \leq 0.01$), psychological stress ($p \leq 0.01$), changes ($p \leq 0.05$), auto-suggestion ($p \leq 0.05$), stressors ($p \leq 0.01$), physiological response ($p \leq 0.01$), emotional response ($p \leq 0.01$), and behavioural response ($p \leq 0.01$).

Table 2. Indicators of academic procrastination in students with different levels of academic performance.

Scale	Low-performing students (n = 183)		High-performing students (n = 252)		p
	M	SD	M	SD	
Frustration	19,33	4,634	17,96	4,496	0,002**
Conflict	9,24	2,252	8,56	2,694	0,005**
Pressure	10,33	2,896	10,64	2,845	
Change	11,02	2,628	10,63	2,949	
Intrusion	17,92	3,333	18,90	3,765	0,005**
Physiological assessment	35,04	9,923	32,86	9,680	0,022*
Emotional assessment	10,28	3,043	9,63	3,116	0,030*
Behavioral assessment	20,14	5,575	17,67	5,717	0,000***
Cognitive assessment	6,49	2,176	6,61	2,336	

Note: *$p < .05$; **$p < .01$; ***$p < .001$.

To understand the relationship between academic procrastination, stress, and students' performance, a correlation analysis was carried out.

The correlation analysis showed that students' academic performance was positively associated with self-discipline ($p \leq 0.01$) and self-control ($p \leq 0.01$) and negatively associated with frustration ($p \leq 0.01$), conflict ($p \leq 0.01$), physiological response ($p \leq 0.01$), and emotional and behavioural responses ($p \leq 0.01$).

Table 3. Spearman correlations between the study variables.

Variables	FP	SA	L	PP	O	AF	I	SC
Frustration	,176**	,411**	,290**	,286**		,268**	,365**	-,106*
Conflict	,117*	,274**	,193**	,271**		,233**	,266**	
Pressure	,210**	,398**	,272**	,172**		,332**	,327**	
Change	,160**	,154**	,246**	,110*		,172**	,309**	
Intrusion	,156**	,248**	,153**		,164**	,295**	,245**	,302**
Physiological assessment	,180**	,355**	,309**	,297**		,229**	,383**	
Emotional assessment	,266**	,361**	,271**	,148**		,364**	,325**	
Behavioral assessment	,209**	,287**	,289**	,244**		,250**	,434**	
Cognitive assessment		,157**			,119*	,149**		,160**

Note: FP – frequency of procrastination; SA – social anxiety, L – laziness, PP – poor perfectionism, O – organization, AF – avoidance of failure, I – impulsivity, SC – self-control.

The analysis of the relationship between the procrastination indicators, stressors and responses to them revealed that social anxiety and failure avoidance were positively associated with all stress indicators ($p \leq 0.01$), while the incidence of procrastination, laziness, poor perfectionism, and impulsiveness were positively associated with all types of stressors and responses to them ($p \leq 0.01$). Self-discipline and self-control are positively associated with auto-suggestion ($p \leq 0.01$) and cognitive response ($p \leq 0.05$), while self-control negatively correlates with frustration ($p \leq 0.05$).

Discussion

The research found that low-performing students are more prone to experiencing procrastination, laziness, and impulsive decision-making when trying to manage their time. At the same time, high-performing students are capable of self-control and can organize and structure their activities.

Therefore, in accordance with the results obtained, it can be claimed that academic procrastination among students is an indicator of academic decline. Yet, the only question that remains is whether a high propensity to procrastination causes academic decline or, vice versa, poor performance leads to procrastination as a mechanism for coping with stress.

Studies have found that procrastination can act as a coping mechanism in the fight against dissatisfaction with one's own progress and achievements.

The analysis of the relationship between the indicators of procrastination and stressors, as well as of the responses to them in students, showed that the higher the student's social anxiety, failure avoidance, procrastination incidence, laziness, poor perfectionism and impulsiveness levels, the higher he or she evaluates all stressors, as well as the severity of responses to them. Perhaps procrastination helps them to justify inaction caused by the fear of making a mistake, being unsuccessful, attracting excessive attention to themselves, or realising how helpless they are. Thus, in presence of a high procrastination level, there are also high levels of distress, emotional and behavioural responses.

The correlation relationships found between procrastination, stress, and academic performance indicate the possibility to adjust behaviour strategies via counselling.

Conclusion

The analysis of the relationship between procrastination, stress level and academic performance of students has allowed for drawing the main conclusions:

One of the topical focus areas of the modern education system is studying the causes and consequences of procrastination in people of different ages.

Students who delay doing their homework are more susceptible to stressors, and their response to them is more acute. They are more likely to experience frustration and dissatisfaction, as well as psychological stress, which manifests itself in nervousness, headaches, gastrointestinal disorders, exhaustion, fear, anxiety, anger, and a sense of guilt. In general, stress levels are significantly higher in the low-performing group.

A comparative study of procrastination coping strategies for groups of students with different academic performance showed that low-performing students are more prone to experiencing procrastination, laziness and a lack of discipline. Successful students are capable of self-control, they can organize and structure their activities.

The correlation analysis data allow for the conclusion that a high level of procrastination is related to stress and academic failure.

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