

Influences of anxious and procrastinating behavior on academic performance

Ion ALBULESCU
Adriana Denisa MANEA
Cristian Nicolae STAN
Babeş-Bolyai University, Cluj-Napoca, Romania

Abstract: *Procrastinating behavior and assessment anxiety are increasingly encountered as maladaptive behaviors among young people, which increases the concern of educators and parents. In particular, the need to deal with the transition from traditional learning to active learning spaces has created new situations that have the potential to increase the prevalence of assessment anxiety and procrastination. The negative effects of the two behaviors (procrastination and evaluation anxiety) are perceived with some difficulty by the subjects who develop them, their denial being common. Emotions triggered by the evaluative moment and not properly controlled/managed can have negative effects not only in terms of academic performance, but also on students' health. Associated with this anxious state, procrastinating behavior reinforces the individual's cognitive and psycho-affective dysfunctionality, with particularly serious long-term negative effects.*

Keywords: *procrastination, assessment anxiety, academic performance, health status.*

Evaluation anxiety - conceptualization, causes, manifestations, effects

In the course of everyday activities almost everyone develops feelings of anxiety - fear and worry - as an emotional response to various situations that are part of normal life¹. The anxious state can be triggered and sustained in the short term (understood as an attribute/trait) or long term (in which case the question is posed in terms of anxiety disorder).

Anxiety is medically defined as an abnormal or overwhelming feeling of worry and fear². Anxiety or fear is accompanied by certain somatic manifestations: palpitations, rapid and shallow breathing, sweating, tremors. It involves the perception or anticipation of a danger, internal or external³. Anxiety is multifaceted, i.e. it includes various elements from the fields of human functioning, such as: the physiological field, the cognitive field, the behavioral and affective field (clarifications: a. physiological symptoms: increased heart rate, breathing difficulties, pain/tightness in the chest, feeling of suffocation, dizziness, sweating, hot flashes, chills, nausea, stomach upset, diarrhea, tremors, restlessness, tingling or numbness in the arms or legs, loss of balance, fainting, stiffness, dry mouth, etc.; b. affective symptoms: nervousness, tension, tension, fear, fear, dread, irritability, instability, agitation, impatience, frustration, etc.; c. cognitive symptoms: fear of losing

¹ Mandy Bamber, Joanne Kraenzle Schneider, "Mindfulness-based meditation to decrease stress and anxiety in college students: A narrative synthesis of the research", *Educational Research Review*, 18, 2016, pp. 1–32.

² Merriam-Webster, Definition of Anxiety. Retrieved December 30, 2018, from <https://www.merriam-webster.com/dictionary/anxiety>

³ Viorel Mih, *Psihologie educațională*, Vol. 1, Editura ASCR, Cluj-Napoca, 2010.

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control, of not being able to cope, fear of bodily harm or death, fearful thoughts, images or memories, poor concentration, confusion, limited attention, poor memory, loss of objectivity, etc.; d.behavioral symptoms: avoidance of threatening signs or situations, escape, flight, seeking safety, protection, restlessness, restless gait, hyperventilation, feeling frozen, stiffness, difficulty speaking, etc.)⁴.

Statistically, the data tells us that approximately 30% of teenagers and adults have experienced anxiety, with women more likely to report it than men. Also, 75% of people with anxiety experience their first episode by age 22, and only about a third of people who struggle with anxiety have received treatments, given that some people experience feelings of anxiety that are severe, not they disappear over time and have a negative impact on everyday life⁵.

Evaluation anxiety is a construct that defines the extent to which the evaluation situation is perceived by the student as threatening. It is actually a strong emotional reaction that an individual experiences before and during an examination⁶. Assessment anxiety is considered to be an emotional state present during examinations that triggers states of tension, nervousness, and worry associated with physiological arousal derived from activation of the autonomic nervous system. When students are placed in an evaluative situation, comparative and competitive behaviors will lead to heightened anxiety that will disrupt their focus on the activity of doing what is necessary to successfully complete work tasks⁷.

Evaluation anxiety, found in specialized literature and as performance anxiety it is classified as social phobia⁸. Through performance anxiety, a phenomenon close to fear is established, which combines behavioral, cognitive, as well as physiological responses arising from a real danger or from various unknown causes. Not infrequently, people are afraid of making a disastrous mistake or of being negatively evaluated⁹. If individuals are unable to cope with possible fearful emotions and somatic reactions, their negative feelings continue to increase until

⁴ David A. Clark, Aaron T. Beck, 2012, *Terapia Cognitiva A Tulburarilor De Anxietate*, Vol. 1, Editura ASCRED, Cluj-Napoca, 2012, p. 19.

⁵ American and Depression Association of America, Home | Anxiety and Depression Association of America, ADAA, Retrieved December 31, 2018, from <https://adaa.org/>

⁶ Figen Akca, “The relationship between test anxiety and learned helplessness”, *Social Behaviour and Personality*, 39(1), 2011, pp. 101-112.

⁷ Moise Zeidner, Gerald Matthews, “Emotional intelligence in gifted students”, *Gifted education international*, 33(2), 2017, pp. 163-182.

⁸ Sara Ascenso, Rosie Perkins, Aaron Williamon, “Resounding meaning: A PERMA wellbeing profile of classical musicians”, *Frontiers in Psychology*, 9, 2018.

⁹ Paula Thomson, Victoria Jaque, *Creativity and the Performing Artist: behind the Mask. Creativity and the Performing Artist: behind the Mask*. Academic Press Inc, 2017.

they begin to experience a panic attack¹⁰. Obviously, this type of experience also has a negative impact on recorded performances. Following a panic attack, the worry that future acts may be sabotaged by performance anxiety increases, leading to impaired health. So anxiety can also cause arrhythmic heartbeats or even a heart attack.

The generative causes of evaluation anxiety can be cognitive (negative thoughts, global evaluations associated with a previous failure, threats to the ego that are based on self-esteem), affective (evaluation of one's own state: state of tension, tense muscles, tremors) or behavioral (lack of learning skills, avoiding and/or postponing work tasks or the effort that needs to be invested)¹¹.

The anxiety that students show in assessment situations specific to school activity is described by a set of negative cognitions regarding results/performance, personal skills or adaptation strategies and neurovegetative reactions (expression of the intensification of the activity of the autonomic nervous system), that some of the students show before, during or after a written or oral assessment situation – aptitude test, knowledge verification paper, semester thesis, oral listening to a subject, college entrance exam, school Olympiad¹².

Sources of assessment anxiety mainly include students' uncertainty about the nature/content of the formulated requirements, the expected results as well as their ability to satisfy these requirements¹³. Repetitive negative thinking and anticipatory exaggeration of the consequences of failure is thus one of the defining characteristics of evaluation anxiety¹⁴. Research carried out in the field of metacognitive beliefs has concluded that they play an important role both

¹⁰ Fernholz, I., Mumm, J. L. M., Plag, J., Noeres, K., Rotter, G., Willich, S. N., Ströhle, A., Berghöfer, A., Schmidt, A, “Performance anxiety in professional musicians: a systematic review on prevalence, risk factors and clinical treatment effects”, *Psychological Medicine*, 49(14), 2019, pp. 2287–2306. Amelie Guyon, Regina Studer, Horst Hildebrandt, Antje Horsch, Urs Nater, Patrick Gomez, “Music performance anxiety from the challenge and threat perspective: psychophysiological and performance outcomes”, *BMC Psychology*, 8(1), 2020, pp. 1–13.

¹¹ Ion Albulescu, Adrian-Vicențiu Labăr, Adriana Denisa Manea, Cristian Stan, “The Mediating Role of Anxiety between Parenting Styles and Academic Performance among Primary School Students in the Context of Sustainable Education”, *Sustainability* 15, 2023, p. 1539.

¹² Viorel Robu, *Anxietatea față de evaluarea orală în rândul liceenilor, Idei și valori perene în științele socio-umane. Studii și cercetări*, Tomul XIII, Editura Argonaut, Cluj-Napoca, 2008b, 299-321

¹³ Kerry Hull, Heather Lawford, Suzanne Hood, Vanessa De Carvalho Oliveira, Michele Murray, Maxime Trempe, Jamie Crooks, Michael Jensen, “Student Anxiety and Evaluation”, *Collected Essays on Learning and Teaching*, 2019, 12, pp. 23-35.

¹⁴ Christopher Huntley, Bridget Young, Catrin Tudur Smith, Peter Fisher, “Uncertainty and test anxiety: Psychometric properties of the Intolerance of Uncertainty Scale – 12 (IUS-12) among university students”, *International Journal of Education*, 2020, p. 104.

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in the initiation and maintenance of worry, an important psychological phenomenon in the evolution of anxiety¹⁵.

The concept of fear of assessment can be described as a core construct of student anxiety in active learning spaces¹⁶. Thus, assessment anxiety can be caused by several factors, starting from general aspects such as students' doubts about their intellectual abilities, the level of knowledge and competences held to specific elements, such as concerns about time management abilities (ineffective management of working time or its insufficiency), external pressures to be successful (the high expectation of the social environment, hence the candidate's concern that he cannot achieve the expected success¹⁷), insufficiently defined institutional standards to record quality elements, concerns about the fairness of certain assessment types and tools (e.g., across studies, students reported that oral presentations and high-stakes written assignments caused them more anxiety¹⁸).

Evaluation anxiety associated with a negative emotion is frequently encountered in today's society, all the more so as evaluation situations for ranking and selection have increased, and concerns for competition and self-affirmation are imperiously claimed by almost every individual. An exam, a test is not a condition that creates anxiety for the candidate, but the evaluative situation is responsible for revealing a state of anxiety related to the feeling of possible failure, increasing it more than necessary¹⁹.

The analysis of studies that aimed to measure the impact of assessment anxiety on academic performance indicates that test anxiety is associated with low performance on cognitive tests, efficiency being more affected than effectiveness Fe²⁰. At the same time, there is a significant

¹⁵ Igor Racu, Violeta Lungu, “Assessment of metacognitive beliefs about concern”, *Journal of Psychology. Special Pedagogy. Social Work*, 2019, 56(3), 52-60.

¹⁶ Katelyn Cooper, Sara Brownell, “Student anxiety and fear of negative evaluation in active learning science classrooms”, *Active learning in college science: The case for evidence-based practice*, Springer Nature Switzerland AG, 2020. pp. 909–925.

¹⁷ Ahmet Alkayish, “Psychological Aspects of Examination Anxiety and Ways to Cope with it”, *Azərbaycan Məktəbi*, Vol. 683, no. 2, 2019, pp.89-106. • Eleanor Hawe, Una Lightfoot, Helen Dixon, “First-year students working with exemplars: Promoting self-efficacy, self-monitoring and self-regulation”, *Journal of Further and Higher Education*, 11(2), 2017, pp. 1–15.

¹⁸ Valerie Sotardi, Hilary Dutton, “First-year university students' authentic experiences with evaluation anxiety and their attitudes toward assessment”, *Assessment & Evaluation in Higher Education*, 47:8, 2022, pp. 1317-1329.

¹⁹ Ion Albulescu, Adrian-Vicențiu Labăr, Adriana Denisa Manea, Cristian Stan, “The Mediating Role of Anxiety between Parenting Styles and Academic Performance among Primary School Students in the Context of Sustainable Education”, *Sustainability* 15, 2023, p. 1539.

²⁰ Michael Eysenck, Susanna Payne, *Effects of anxiety on performance effectiveness and processing efficiency*. Unpublished manuscript, Royal Holloway University of London, Egham, Surrey, UK, 2006.

negative correlation between test anxiety and academic performance²¹. So, a high level of test anxiety can lead to a decrease in motivation towards school or academic success, as well as in the performance that pupils or students actually achieve²².

Anxiety impairs the efficient functioning of the goal-directed attentional system and increases the extent to which the processing of external stimuli is influenced. In addition to decreasing attentional control, anxiety increases attention to threat-related stimuli. It should be noted that some research has shown that anxiety cannot affect performance effectiveness (performance quality) when it leads to the use of compensatory strategies such as an investment of additional effort or increased use of processing resources²³.

Among the range of negative consequences of assessment anxiety are also interrelational problems, in the sense that anxiety disorders in childhood cause a substantial impairment at the level of family and intercollegiate relationships, as well as a low level of both academic and social achievements²⁴.

Procrastination and consequences of maladaptive behavior

Procrastination or procrastination is an easily observable habit in the vast majority of individuals being appreciated as an inherent human tendency²⁵. Although the term procrastination (a neologism taken from the English language, "procrastination" which means postponing or delaying the start of actions) was borrowed relatively recently into the vocabulary of the Romanian language, it is used more and more frequently²⁶.

²¹ Claudia Crișan, Ion Albulescu, Iulia Copaci, "The Relationship Between Test Anxiety and Perceived Teaching Style. Implications and Consequences on Performance Self- Evaluation", *Procedia - Social and Behavioral Sciences*, 142, 2014, pp. 668 – 672; Claudia Crișan, Iulia Copaci, "The Relationship between Primary School Childrens' Test Anxiety and Academic Performance", *Procedia - Social and Behavioral Sciences*, 180, 2015, pp. 1584 – 1589.

²² Viorel Robu, *Psibologia anxietății față de testare și examene*, Editura Performantica, Iași, 2011.

²³ Michael Eysenck, Nazanin Derakshan, Rita Santos, Manuel Calvo, "Anxiety and Cognitive Performance: Attentional Control Theory", *American Psychological Association*, Vol. 7, No. 2, 2007, pp. 336–353.

²⁴ Kelly Drake, Golda Ginsburg, "Family factors in the development, treatment, and prevention of childhood anxiety disorders", *Clin. Child. Fam. Psychol. Rev.*, 15, 2012, pp. 144–162.

²⁵ Joseph Ferrari, Jean O'Callaghan, Ian Newbegin, "Prevalence of procrastination in the United States, United Kingdom, and Australia: Arousal and avoidance delays among adults", *The American Journal of Psychology*, 7(1), 2005, pp. 1-6.

²⁶ Manea Adriana Denisa, Stan Cristian, Labăr Adrian, "Procrastination – from causes and effects to intervention", *Astra Salvensis*, X, no. 20, 2020, pp. 127-137; Manea Adriana Denisa, *Procrastinarea și efectele ei, în Ghid pentru o studenție de succes. Abordări inovative centrate pe creșterea retenției universitare în rândul studenților*, Vol. I, Învățarea în context academic, Editura Presa Universitară Clujeană, Cluj-Napoca, 2022, pp. 195-229.

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Procrastinating behavior is almost ubiquitous, which makes its expression extremely varied, depending a lot on the level and conditions of cultural influence²⁷. Standard definitions of procrastination emphasize the irrational nature of this habit, a critical criterion being that the individual delays, postpones starting or completing an action/task²⁸.

Among the types of procrastination, academic procrastination is the most common, being nicknamed the student syndrome, due to the much increased frequency of manifestation among them²⁹. In academia, procrastination is a well-known, almost commonplace phenomenon. Students often procrastinate on tasks and activities inherent to learning and study, despite being aware of the repercussions of procrastination³⁰. This type of procrastination has been defined as the predominant tendency to postpone academic activities and is almost always associated with anxiety. Procrastinating behavior during sessions is illustrated by putting off studying/preparing for the exam until the night before it, which will obviously lead to an exam result that may affect the student³¹.

Procrastination refers to the voluntary delay of an action on purpose, despite the fact that damages/negative effects of this delay are expected to be recorded. According to literature estimates, at least half of students believe and understand that procrastination affects their academic achievement and well-being. An analysis of the responses in this regard, regarding physical problems related to procrastination showed that they were characterized by stress and anxiety (tension, pain and sleep and rest), while psychological problems were related to stress and anxiety, but also depression (self-criticism, remorse and self-esteem)³². To date, evidence-based ideas on how to differentiate severe from less severe cases of procrastination among students do not exist, although they are important and of interest in identifying those students/adults who need support. Studies estimate that nearly all college students engage in procrastination from time to time, while

²⁷ Liesel Van Wyk, *The relationship between procrastination and stress in the life of the high school teacher*, University of Pretoria EDT, 2004.

²⁸ Frode Svartdal, Efim Nemtcu, “Past Negative Consequences of Unnecessary Delay as a Marker of Procrastination” *Front. Psychol., Sec. Quantitative Psychology and Measurement*; 13, 2022.

²⁹ Joseph Ferrari, “Procrastination as self-regulation failure of performance: Effects of cognitive load, self-awareness, and time limits on ‘working best under pressure’”, *European Journal Personality*; 15(5), 2001, pp. 391-406.

³⁰ Piers Steel, “The nature of procrastination: a meta-analytic and theoretical review of quintessential self-regulatory failure”, *Psychological Bulletin* 133, 2007, pp. 65–94; Steel Piers and Katrin Klingsieck, “Academic procrastination: psychological antecedents revisited”, *Australian Psychologist* 51, 2016, 36–46.

³¹ Esther Rothblum, Laura Solomon, Janice Murakami, “Affective, cognitive, and behavioral differences between high and low procrastinators”, *Journal of Counseling Psychology*, 33(4), 1986, p. 387.

³² Alexander Rozental, David Forsström, Ayah Hussoon, Katrin Klingsieck, “Procrastination Among University Students: Differentiating Severe Cases in Need of Support From Less Severe Cases”, *Front. Psychol*, 2022.

75% consider themselves habitual procrastinators³³. For almost half of these habitual procrastinators, even though procrastination is a real and persistent problem they still want to have such experiences³⁴, and those who seek help for self-regulation problems inherent in procrastination do so more because of feelings of shame associated with procrastination³⁵. Sometimes procrastinating behavior occurs even to avoid criticism³⁶.

Psychologists' findings indicate that academic procrastination is associated with many personality and behavioral variables. The literature related to the prevalence of procrastination and the associated factors does not provide significant information about the dimensions of procrastination, its reasons are little known, and the results obtained in this regard are even contradictory³⁷. It should be mentioned, in this sense, that sometimes academic procrastination produces positive effects from the perspective of well-being and performance³⁸. The tendency to procrastinate as a motivational strategy is increasingly evident among students. There are people who systematically postpone the start of an activity, considering that, if they carry out their activity under pressure, they perform much better. In this representative category is academic procrastination, known in specialized literature as the "student syndrome". In this situation, the learning task is postponed until the last moment, due to boredom or lack of motivation towards a subject considered uninteresting or unimportant. The anxiety and frustration felt near the exam activates the ability to respond and is the person's self-regulation mechanism³⁹.

Also, although some elements related to procrastination have been identified, it is still an unknown topic that deserves further investigation. For example, the emotional or neurotic aspects of perfectionism appear to be more closely related to severe procrastination, suggesting that

³³ Piers Steel, "The nature of procrastination: a meta-analytic and theoretical review of quintessential self-regulatory failure", *Psychological Bulletin* 133, 2007, pp. 65–94.

³⁴ Carola Grunschel, Lena Schopenhauer, "Why are students (not) motivated to change academic procrastination? An investigation based on the transtheoretical model of change", *Journal of College Student Development*, 56, 2015, pp. 187–200.

³⁵ Benjamin Giguère, Fuschia Sirois, Mamta Vaswani, "Delaying things and feeling bad about it? A norm-based approach to procrastination", *Procrastination, Health, and Well-Being*, 2016, pp. 189–212.

³⁶ Neal Anthony, *An empirical phenomenological investigation of procrastinating behaviour*, Ph.D. Dissertation. Rhodes University, Grahamstown, 2010.

³⁷ Mostafa Kazemi Marjan Fayyazi, Manijeh Kaveh, "Investigation of procrastination prevalence and its causes among university managers and employees", *Journal of management research*, 2(4), 2010, pp. 42-63.

³⁸ Thomas Brinthaupt, Chul Shin, "The relationship of academic cramming to flow experience", *College Student Journal* 2001; 35(3), pp. 457-72.

³⁹ Manea Adriana Denisa, *Procrastinarea și efectele ei, în Ghid pentru o studenție de succes. Abordări inovative centrate pe creșterea retenției universitare în rândul studenților*, Vol. I. Învățarea în context academic. Editura Presa Universitară Clujeană, Cluj-Napoca, 2022, pp. 195-229

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students who are preoccupied with making mistakes and falling short of certain standards may need treatment that specifically targets these problems⁴⁰.

Severe procrastination is certainly associated with large negative effects on all domains of life that have been examined in the current studies, especially for work/studies, but also for physical activity/diet and rest/sleep, which registers on the same undesirable coordinates regarding the impact of procrastination on both academic achievement⁴¹.

The effects, respectively the consequences of procrastination can be deciphered at the level of several levels such as performance, well-being and health⁴². The negative and low association between procrastination and academic performance is highlighted in several studies, with the emphasis that procrastination is sometimes harmful, sometimes harmless, but certainly useless⁴³. At the same time, it confirms the negative relationship between procrastination and academic performance⁴⁴. Furthermore, related to online procrastination, research highlights that people report about 50% of time spent online (social media, online shopping) as procrastination, with productivity implications and costs in all areas⁴⁵. In relation to psychological well-being, procrastination is related to certain negative mood states, such as anxiety and depression, shame, guilt, distress, diminished mental health⁴⁶. At the same time, regarding health status, procrastination is also associated with a set of risky behaviors for health, such as unhealthy eating and reduced physical activity⁴⁷.

⁴⁰ Fuschia Sirois, Danielle Molnar, Jameson Hirsch, “A meta-analytic and conceptual update on the associations between procrastination and multidimensional perfectionism”, *European Journal of Personality*, 31, 2017, pp. 137–159.

⁴¹ Carola Grunschel, Justine Patrzek, Stefan Fries, “Exploring reasons and consequences of academic procrastination: an interview study”, *European Journal of Psychology of Education*, 28, 841–861; Kyung Ryung Kim, Eun Hee Seo, “The relationship between procrastination and academic performance: a meta-analysis”, *Personality and Individual Difference*, 82, 2015, pp. 26–33.

⁴² *Ibidem*.

⁴³ Piers Steel, “The nature of procrastination: a meta-analytic and theoretical review of quintessential self-regulatory failure”, *Psychological Bulletin*, 133, 2007, pp. 65–94.

⁴⁴ Sowon Kim, Sebastien Fernandez, Lohyd Terrier, “Procrastination, personality traits, and academic performance: When active and passive procrastination tell a different story”, *Personality and Individual Differences*, Vol. 108, 2017.

⁴⁵ Jennifer LaVoie, Timothy Pynchyl, “Cyberslacking and the procrastination superhighway: A web-based survey of online procrastination, attitudes, and emotion”, *Social Science Computer Review*, 19(4), 2001, pp. 431-444.

⁴⁶ Fuschia Sirois, Timothy Pynchyl, “Procrastination”, *Encyclopedia of Mental Health*, 3, 2016, pp. 330-338.

⁴⁷ Fuschia Sirois, Benjamin Giguère, “When resistance isn’t futile: Task enjoyment as a protective factor against health procrastination, in the face of temptation”, *8th Biennial Procrastination Research conference*, Sherbrooke, QC, 2013.

Conclusions

Procrastinating behavior and assessment anxiety are real obstacles to the desirable development and preparation for the professional life of young people, especially since the two reinforce each other.

Procrastination is not only the consequence of ineffective time management, lack of motivation or an idealized image of performance, but represents the complex interaction of stable cognitive, affective and behavioral factors. Procrastinating behavior is the expression of the combination of several dysfunctional elements such as: poor impulse control, lack of perseverance, lack of discipline in work, inability to work methodically and organize time. The most common excuses to justify this behavior are fatigue, lack of time or the appearance of external disturbing factors, but in fact it is an incorrect prioritization of tasks. Sometimes the time needed to complete a project is mis-estimated, creating an illusion of certainty about the completion date. One of the causes of procrastination often cited by students is the false belief that they need to feel inspired or motivated to pursue a certain activity, at a certain time, that they see fit. The reality is that waiting for the right moment to carry out certain tasks, especially the unpleasant ones, translates into "neither the context nor the moment will ever be right", and thus procrastination occurs⁴⁸.

Countering the negative effects of both assessment anxiety and procrastination comes down to the dimension of self-regulation, the development of emotional control and time management skills.

⁴⁸ Manea Adriana Denisa, *Procrastinarea și efectele ei, în Ghid pentru o studenție de succes. Abordări inovative centrate pe creșterea retenției universitare în rândul studenților*, Vol. I, Învățarea în context academic, Editura Presa Universitară Clujeană, Cluj-Napoca, 2020, pp. 195-229