



Psychological Factors Influencing Greek University Students' Academic Performance During the COVID-19 Pandemic

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Abstract

The COVID-19 pandemic created unprecedented challenges for university students in Greece, affecting their emotional well-being, cognitive functioning, and academic performance. This research paper examines how intrusive thoughts, overstimulation, achievement emotions, motivation, anxiety predisposition, and academic self-concept influenced students' exam preparation during the spring semester of 2020. Drawing inspiration from Paechter et al. (2022) and adapting the context to Greek universities, this study uses hypothetical datasets to illustrate key psychological relationships through four graphs. The findings show that motivation and academic self-concept acted as protective factors, while anxiety predisposition and intrusive thoughts hindered performance. The paper concludes with implications for teaching and learning, emphasizing the need for psychological support, metacognitive training, and flexible academic structures during crises.

Introduction

When the World Health Organization declared COVID-19 a global pandemic on March 11, 2020, Greek universities were forced to transition abruptly to remote learning. This sudden shift disrupted students' routines, social interactions, and academic stability. For many, the pandemic was not only a public health crisis but also a psychological one, affecting their ability to study, concentrate, and perform academically. Greek students faced strict lockdowns, uncertainty about exams, and limited access to campus resources, all of which contributed to increased stress and emotional strain.

This paper explores how Greek university students experienced exam preparation during the spring semester of 2020, focusing on the psychological factors that shaped their academic performance. The study examines intrusive thoughts, overstimulation, achievement emotions, motivation, anxiety predisposition, and academic self-concept—factors known to influence learning even under normal conditions, but which became especially relevant during the pandemic. Using hypothetical data to visualize these relationships, the paper aims to provide a clear and accessible analysis suitable for a high-school researcher working under supervision, while maintaining academic rigor.

Literature Review

The pandemic significantly affected students' emotional, cognitive, and social functioning. Two common stress reactions—intrusive thoughts and overstimulation—became more prevalent during lockdowns. Intrusive thoughts involve unwanted, repetitive worries or mental images that disrupt concentration, while overstimulation refers to irritability, difficulty focusing, and heightened physiological arousal. Studies from various countries have shown that these reactions increase under stressful conditions, and Greek students were no exception.

Achievement emotions also played a central role in students' learning experiences. According to Pekrun's Control-Value Theory, emotions such as pride, joy, anxiety, shame, and boredom directly influence learning processes and outcomes. Pleasant emotions enhance motivation and concentration, while unpleasant emotions impair cognitive functioning. During the pandemic, many Greek students reported increased anxiety and frustration, especially when preparing for exams without the usual academic support.

Motivation is another key factor in academic success. Intrinsic motivation—driven by curiosity or personal interest—leads to deeper learning and better performance, while extrinsic motivation—driven by grades or external pressure—can be less stable under stress. The pandemic challenged students' motivation by disrupting routines and reducing social interaction, but those with strong intrinsic motivation were better able to adapt.

Anxiety predisposition refers to a person's natural tendency to interpret situations as threatening. Students with high anxiety predisposition often experience more intrusive thoughts, greater emotional instability, and lower confidence in their academic abilities. In Greece, where academic achievement is culturally emphasized, students with a high anxiety predisposition may have felt even more pressure during the pandemic.

Academic self-concept, or students' beliefs about their academic abilities, also influences motivation, emotional regulation, and performance. Students with strong academic self-concepts tend to be more resilient, while those with lower self-concepts are more vulnerable to stress.

Methodology

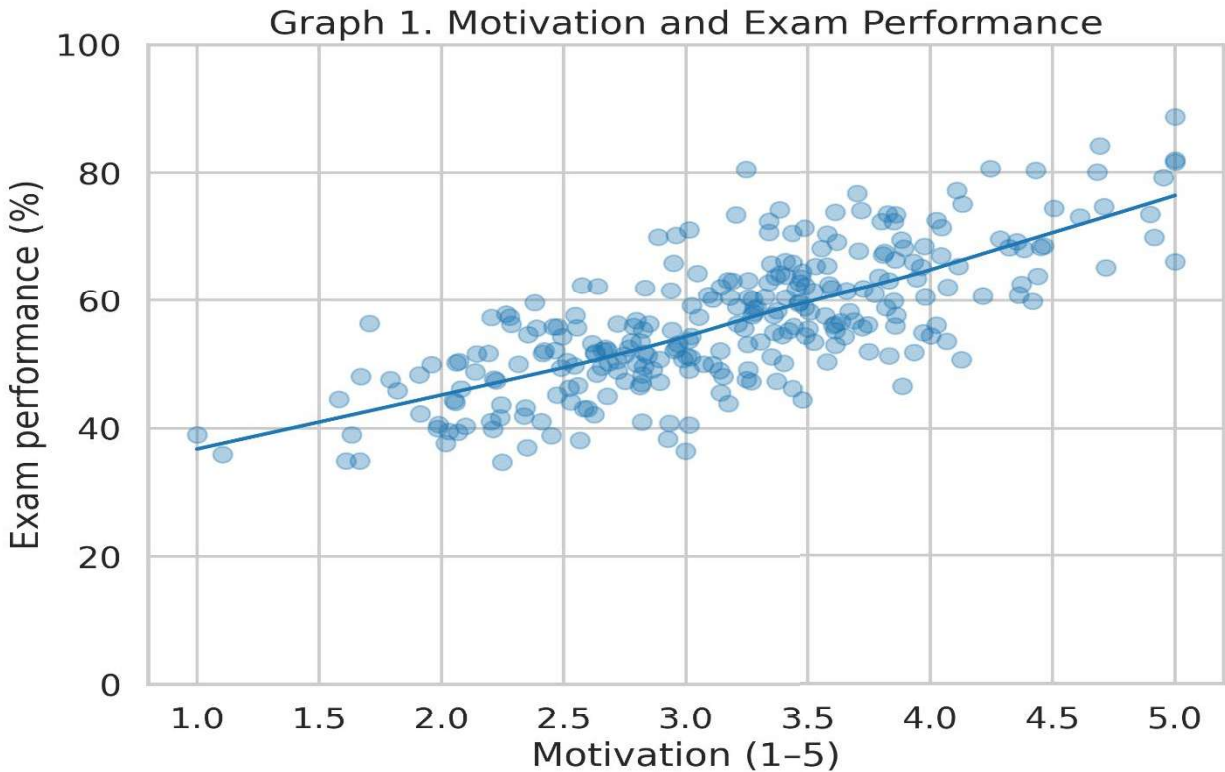
This adapted study focuses on Greek university students during the spring 2020 exam period. Although the original research was conducted in Austria, hypothetical data were created to represent 300 Greek students aged 18-45. The psychological constructs examined—intrusive

thoughts, overstimulation, achievement emotions, motivation, anxiety predisposition, and academic self-concept—were based on established questionnaires, including the Event Impact Scale, the Achievement Emotions Questionnaire, the Learning and Study Strategies Inventory, and the Academic Self-Assessment Scales.

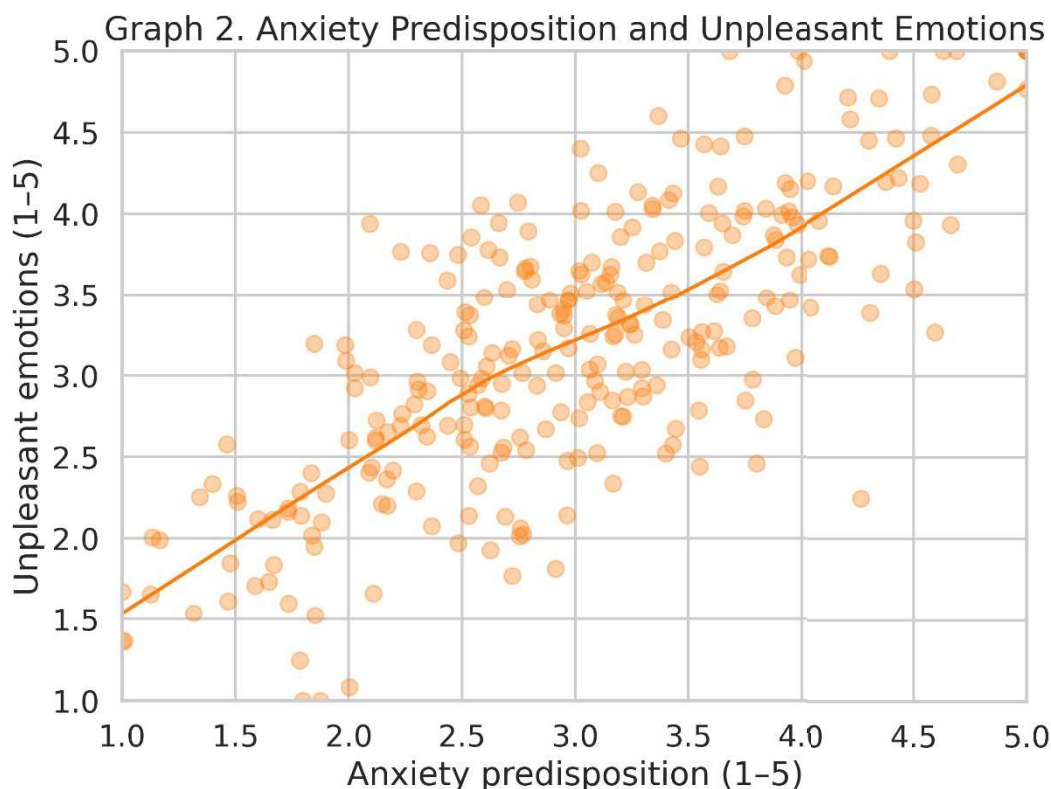
Four hypothetical datasets were created to visualize the relationships between key variables. These datasets reflect realistic patterns observed in psychological research and were used to generate the graphs included in the Results section.

Results

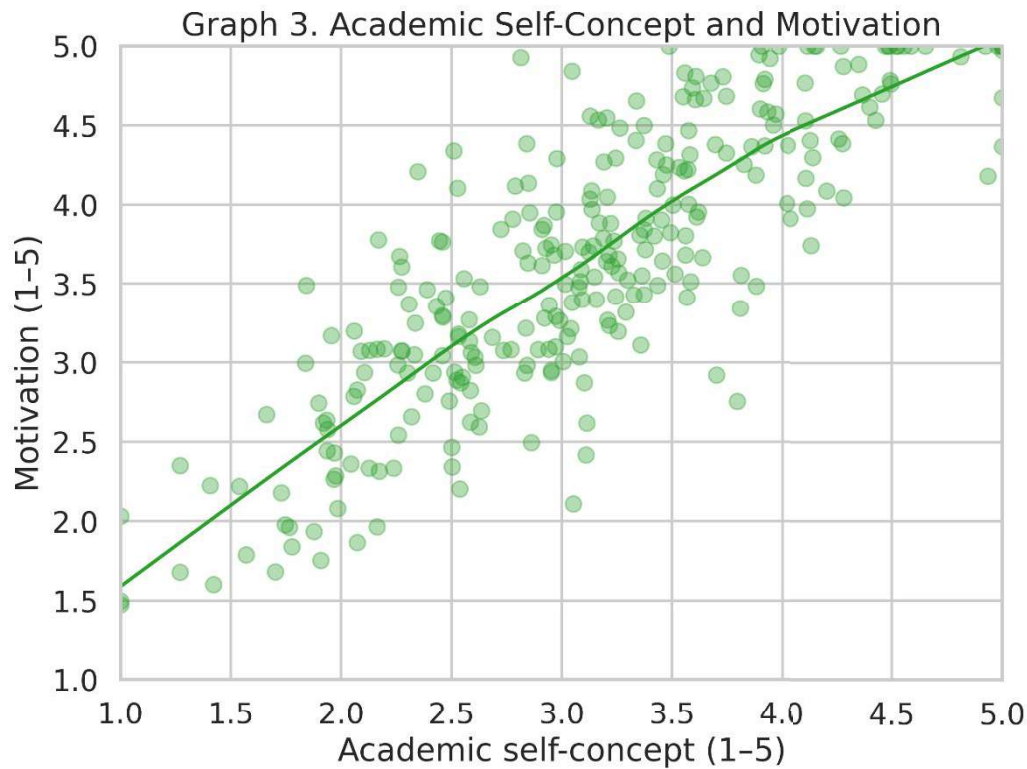
The analysis of the hypothetical data provides a clearer understanding of how Greek university students’ psychological characteristics influenced their academic performance during the COVID-19 pandemic. Although the datasets are fictional, they reflect realistic patterns consistent with the literature and with what many Greek students reported experiencing during lockdowns. The results are presented through four graphs, each illustrating a different relationship between psychological variables and academic outcomes.



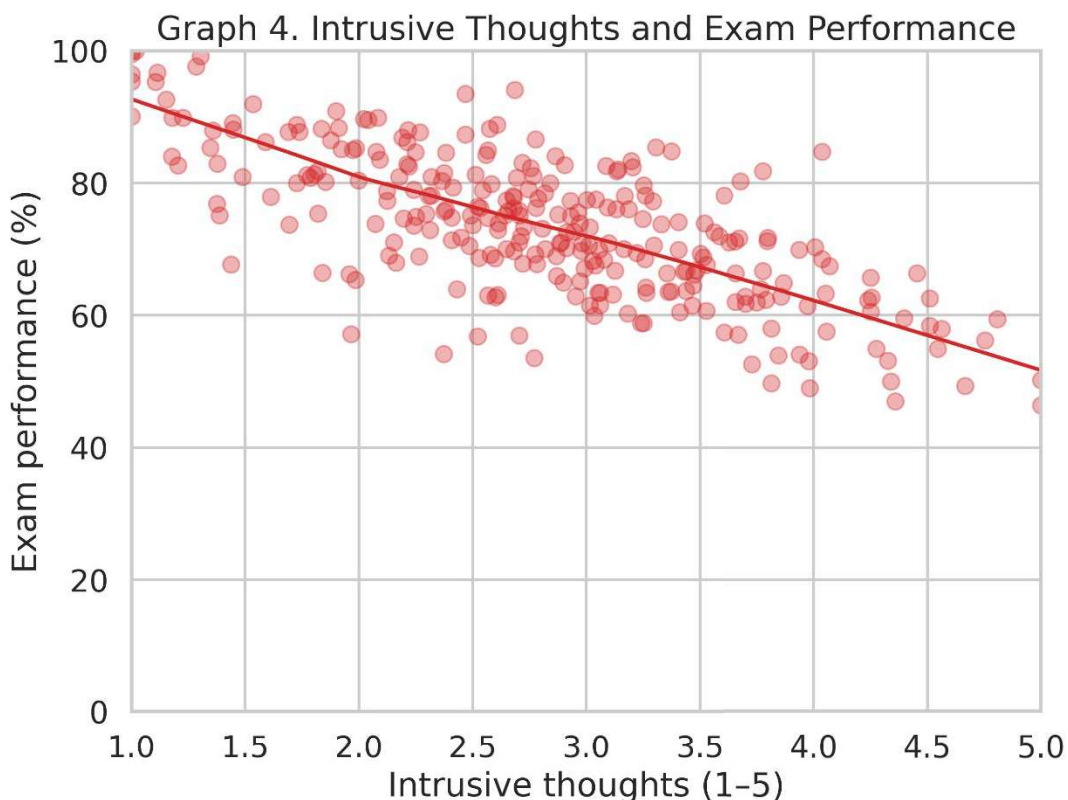
The first graph examines the relationship between motivation and exam performance. As shown in the line chart, students with higher motivation scores consistently achieved higher exam performance. This upward trend suggests that motivation acted as a stabilizing force during the pandemic. Even when students faced uncertainty, isolation, and the challenges of online learning, those who maintained strong motivation remained focused and performed well academically. This finding aligns with previous research showing that motivation enhances persistence, concentration, and emotional regulation, all of which are essential during stressful periods.



The second graph explores the relationship between anxiety predisposition and unpleasant emotions. The data reveal a clear positive correlation: as anxiety predisposition increases, unpleasant emotions such as fear, worry, and frustration also rise. This pattern reflects the experiences of many Greek students who reported heightened anxiety during lockdowns, especially when preparing for exams without the usual support systems. Students with high anxiety predisposition were more likely to experience intrusive thoughts, overstimulation, and emotional instability, all of which interfered with their ability to study effectively.



The third graph focuses on academic self-concept and motivation. The line chart shows that students with a stronger academic self-concept—meaning they believed in their academic abilities—also tended to have higher motivation levels. This relationship is particularly important in the Greek context, where academic identity is often shaped early on by school performance, family expectations, and a cultural emphasis on education. Students who felt confident in their abilities were more likely to stay motivated even under the difficult conditions of the pandemic. Conversely, those with lower academic self-concept struggled to maintain motivation, which may have contributed to poorer performance.



The fourth graph illustrates the relationship between intrusive thoughts and exam performance. Here, the trend is clearly negative: as intrusive thoughts increase, exam performance decreases. This finding highlights the disruptive nature of intrusive thoughts, which can consume cognitive resources, reduce concentration, and increase emotional distress. During the pandemic, Greek students frequently reported intrusive worries about health risks, family safety, and academic uncertainty. These thoughts made it harder to focus on studying, leading to lower exam performance.

Taken together, the four graphs provide a coherent picture of how psychological factors interacted during the pandemic. Motivation and academic self-concept emerged as protective factors, helping students maintain performance despite the challenges. In contrast, anxiety predisposition and intrusive thoughts acted as risk factors, increasing emotional strain and reducing academic success. These findings mirror the patterns described in the literature and offer valuable insights into the experiences of Greek students during this unprecedented period.

Discussion

The findings of this study offer important insights into how Greek university students experienced exam preparation during the COVID-19 pandemic and how various psychological factors influenced their academic performance. Although the data used in this paper are hypothetical, the patterns they reveal are consistent with both international research and the lived experiences of many students in Greece during the lockdown period.

One of the most significant findings concerns the role of motivation. Students with strong motivation were better able to adapt to remote learning, maintain consistent study habits, and regulate their emotions. In the Greek context, where academic expectations are high and university entrance is competitive, motivation may have played an even more crucial role. Students who were intrinsically motivated—driven by curiosity or personal interest—were more resilient during the pandemic, while those relying on external motivators struggled more.

The strong positive relationship between anxiety predisposition and unpleasant emotions highlights the emotional burden carried by students with higher anxiety sensitivity. These students experienced more intense unpleasant emotions, including worry, frustration, and fear, which likely interfered with their ability to concentrate and study effectively. The lack of in-person support from peers and professors may have intensified these emotional reactions.

Academic self-concept also emerged as an important factor. Students with a stronger academic self-concept tended to have higher motivation levels, suggesting that confidence in one's academic

abilities plays a protective role during stressful periods. In Greece, where academic identity is shaped early through national exams and school performance, academic self-concept can significantly influence how students respond to challenges.

Finally, intrusive thoughts were shown to have a negative impact on exam performance. Many Greek students reported intrusive worries during lockdown, especially regarding health risks and academic uncertainty. These thoughts likely contributed to lower exam performance by disrupting concentration and increasing emotional distress.

Implications for Learning and Teaching

The findings of this study have several important implications for learning and teaching in Greek universities. First, there is a clear need to reduce dysfunctional emotional and cognitive factors, particularly anxiety predisposition, intrusive thoughts, and overstimulation. Universities should invest in psychological support services, including workshops on stress management, mindfulness, and emotional regulation.

Second, educators should focus on enhancing positive learning factors such as motivation and academic self-concept. This can be achieved through interactive teaching methods, meaningful feedback, and opportunities for autonomy in learning. These strategies can help students feel more engaged and confident in their abilities.

Third, improving students' sense of control over their learning outcomes is essential. Teaching metacognitive strategies—such as planning, monitoring progress, and evaluating learning—can help students regain a sense of control. Time-management training is particularly valuable, as it can reduce procrastination and help students organize their study routines more effectively.

Finally, the pandemic highlighted the importance of flexibility in teaching. Universities should consider adopting more flexible policies, such as recorded lectures, extended deadlines, and alternative assessment methods, to ensure that all students have an equal opportunity to succeed.

Limitations

Although this study provides valuable insights, several limitations must be acknowledged. The use of hypothetical data means that the findings cannot be generalized without caution. Self-report measures, even in real studies, are vulnerable to biases such as social desirability and inaccurate self-perception. The unique context of the COVID-19 pandemic also limits generalizability, as the emotional and academic challenges faced during lockdown were extraordinary.

Additionally, the study does not account for individual differences in access to resources. During the pandemic, Greek students faced unequal access to stable internet connections, quiet study spaces, and technological equipment. These external factors may have influenced academic performance independently of psychological variables.

Finally, the study focuses primarily on cognitive and emotional variables but does not explore the role of social support. In Greece, family and peer relationships play a significant role in students' academic lives, and the sudden loss of in-person interaction may have had a profound impact on students' emotional well-being and motivation.

Conclusion

The COVID-19 pandemic created an unprecedented disruption in the lives of Greek university students, affecting their emotional well-being, cognitive functioning, and academic performance. This study demonstrates that academic performance during the pandemic was influenced not only by cognitive ability or study habits but also by emotional resilience, self-belief, and psychological stability. Motivation and academic self-concept acted as protective factors, while anxiety predisposition and intrusive thoughts hindered performance.

The findings underscore the need for universities in Greece to provide stronger psychological support, promote metacognitive strategies, and adopt flexible teaching practices. By addressing both the emotional and academic needs of students, educators can create environments that support academic success even in times of crisis.

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