



## Research Article

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# Academic Procrastination in Students During Covid-19 Pandemic: The Role of Perceived Challenges and Learning Motivation

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## Abstract

*The COVID-19 pandemic has caused many changes in educational settings which have been quite demanding. Shifting to online education has resulted in many erratic changes for students, which could have threatened their learning motivation. Therefore, this study examined perceived challenges, learning motivation and academic procrastination during the COVID-19 pandemic among 458 students of public and non-public universities in Albania, and the data were collected through online questionnaires. The findings reveal a strong relationship between academic procrastination, perceived challenges and learning motivation. Furthermore, a multiple linear regression model revealed that academic procrastination was influenced by perceived challenges and motivation. Sociodemographic variables, such as age and gender, were examined. The results are relevant for understanding learning motivational processes and critical variables that influence students' procrastination, academic achievement and adjustment.*

**Keywords:** Perceived COVID-19 challenges, learning motivation, procrastination, gender, Albanian students

## 1. Introduction

The COVID-19 pandemic has brought many challenges in learning settings, and this transition has been critical for students. This study aims to investigate the link between students' perceived challenges, learning motivation and procrastination during the COVID-19 pandemic. In general, pandemic periods are characterised by increased anxiety, stress, feelings of depression and loneliness (Husky et al., 2020; Savitsky et al., 2020). The COVID-19 pandemic has increased the prevalence of depressive symptoms, anxiety and sleep disturbance (Deng et al., 2021); thus, two needs that emerged in education during the pandemic were to foster motivation and to manage procrastination. Particularly, the pandemic has substantially influenced learning and teaching routines and created insecurities in everyday life (Besser, Flett, & Hill, 2022). Many students have faced different challenges during this period, and coping with the new demands of education, resources and environments could have had a toll on motivation and procrastination. Shifting to online learning has evoked stronger negative emotions, higher social isolation and loneliness (Besser et al., 2022), which, combined with environmental and physical changes to adapt to online learning, could lead to

procrastination and failure (Unda-Lopez et al., 2022). Students have reported less learning and more difficulties in their motivational processes during the COVID-19 pandemic (Besser et al., 2022; Li & Che, 2022; Tulaskar & Turunen, 2022). Several studies have focused on perceived challenges in behaviour, affective-cognitive processes in students and their coping and managing stress (García-Ros et al., 2022; Pavin Ivanec, 2022; Tulaskar & Turunen, 2022). In addition, studies have emphasised the challenges that students face in relation to needed resources, learning environment, use of technology, attention and distraction (Pelikan et al., 2021; Tulaskar & Turunen, 2022). Many of the COVID-19 challenges students face in online learning – particularly students in developing countries – are related to resources and an adequate environment for distance learning, such as low internet connection, less knowledge in applying technology and programmes for online learning platforms, difficulties in the provision of materials requiring applications for video editing or difficulties in providing the required tools for accessing online platforms (Maatuk et al., 2021). One of the critical factors for student achievement is adapting to an online learning environment and perceiving learning as effective (Li, & Che, 2022; Pye et al., 2015). Thus, many of the perceived challenges of students for learning during the COVID-19 pandemic, could be related to external factors, such as an adequate learning environment, Internet access and the required technology, which could be a threat to the students' sense of self-control. In contrast, during the COVID-19 pandemic, motivated learners were more successful in managing challenges, adapting to the new requirements of learning, having higher confidence in performing tasks, achieving their academic goals and showing more resilience (Rahiem, 2021); however, students with decreased motivation in online learning settings reported higher levels of procrastination (Melgaard et al., 2022). Procrastination could be a huge threat to academic achievement because of the continuous delay in completing tasks, which in an online environment can be particularly challenging due to less learning interaction, less engagement and less clear behavioural learning in online course platforms (Melgaard et al., 2022). Studies have found that procrastination is linked to negative feelings about learning experiences (Sirois & Pychyl, 2013; Sirois & Pychyl, 2016), perceived ineffectiveness of online teaching, and could be a risk factor for students dropping out (Hong, Lee, & Ye, 2021). Therefore, it could be of relevance to examine the role of motivation and perceived COVID-19 challenges during online learning on students' procrastination.

The current study examines the process of learning motivation and perceived COVID-19 challenges on procrastination outcomes in Albanian students. This extends the current literature on learning motivation mechanisms during the COVID-19 pandemic in Albania. In the current study, the sociodemographic variables of age and gender were tested to measure the potential links with learning motivation, perceived COVID challenges and procrastination. Many studies have reported different findings regarding the relevance of gender in motivational processes in different cultural contexts (Ajilouni et al., 2022; Yu & Deng, 2022). Therefore, the following research questions guided this study:

1. *Is there a significant correlation between motivation, perceived COVID-19 challenges and procrastination in Albanian students?*
2. *Is there a significant correlation between age and motivation, perceived COVID-19 challenges and procrastination in Albanian students?*
3. *Is there a gender difference between motivation, perceived COVID-19 challenges and procrastination?*
4. *Do motivation and perceived COVID-19 challenges influence procrastination in Albanian students?*

## 2. Methods

### 2.1 Participants

A total of 438 undergraduate (68.3%) and graduate (31.7 %) students from Aleksandër Moisiu University, Beder College University, the Medical University of Tirana and Tirana University

participated in the study. Approximately half of them were from public universities (50.2%), and 49.8% were from private universities.

The students' average age was 21.49 years ( $SD = 4.26$ ); 354 participants were female, and 84 (19.2%) were male.

## 2.2 Procedure

A Google online platform was created, and a link was sent to all participating students via email. Consent was obtained, and afterwards, students started to fill in the online questionnaires. Students reported their demographic information and completed the required instruments, which were back translated in this study. The data were collected during April–May 2020, a period of COVID-19 lockdown in Albania. Students acknowledged the goals of the study and read a brief description of the instruments used before answering the online questionnaire. All ethical requirements related to data collection, including voluntary participation and anonymity, were met.

## 2.3 Measures

In this study, students reported intrinsic motivation, procrastination and perceived COVID-19 challenges. All instruments used in this study were taken from the list of instruments used by Schober et al. (2020).

A 3-item scale adopted from Thomas et al. (2018) and Pelikan et al. (2021a/b) was used to measure intrinsic learning motivation. A Likert scale was used to rate each item on a 5-point scale (1 = *totally agree* to 5 = *absolutely disagree*; items were recoded when statistical analyses were conducted). The intrinsic learning motivation scale sample items included 'Currently, doing work for the university is really fun' and 'Currently, I find studying for university really exciting' (Pelikan et al., 2021a/b). Cronbach's alpha was .84.

For procrastination, a 3-item scale taken from Göckner-Rist et al. (2014) and Pelikan et al. (2021a/b) was used. Similar to the motivation scale, a 5-point Likert scale was used to rate each item. Samples of procrastination items include 'In the current home-learning situation, I postpone tasks until the last minute' and 'In the current home-learning situation, I often do not manage to start a task when I set out to do so' (Göckner-Rist et al., 2014, Pelikan et al., 2021a/b). The Cronbach's alpha for the scale was .82.

A 5-item instrument was used to assess perceived challenges during the COVID-19 pandemic (Schober et al., 2020). It measured the perceived challenges that students faced in planning, perceived challenges in managing their activities, perceived challenges in technical limitations, perceived challenges related to the learning space and perceived challenges in keeping the focus on learning and not being distracted. Sample items of the instrument included 'In the current home-learning situation, I find it especially challenging to plan my day', 'In the current home-learning situation, I find it especially challenging that so many things distract me' and 'In the current home-learning situation, I find it especially challenging that I have technical limitations'. Cronbach's alpha for the instrument was reported to be .79.

## 3. Results

Analyses were performed using correlations, independent-samples t-tests and linear multiple regression. First, descriptive statistics and correlations were used to test for significant relationships between variables. The sample did not meet the criteria for normality; thus, Spearman rank correlations were used. Second, an independent-samples t-test was used to test for gender differences in perceived COVID-19 challenges, motivation, and procrastination. Third, a linear regression model was performed with perceived COVID-19 challenges and motivation as predictors and procrastination as potential outcomes. Statistical Package for the Social Sciences Version 26 (SPSS26) was used to

perform statistical analyses.

3.1 Descriptive statistics, correlations and independent t-test results

The average age of students was  $M = 21.49$ ,  $SD = 4.26$ . Of the 458 participants, 370 were female (80.2%) and 88 male (19.8%). The average perceived COVID-19 challenges scores reported were  $M = 3.71$ ,  $SD = 1.01$ , indicating a high level of perceived challenges during the COVID-19 pandemic. For motivation, the average scores reported were  $M = 3.11$ ,  $SD = 1.15$ ; for procrastination, they were  $M = 3.06$ ,  $SD = 1.25$ . Table 1 shows the descriptive statistics and Spearman rank correlations. The sociodemographic variable of age was positively correlated with motivation,  $r(458) = .132$ ,  $p = .005$ , while no significant results were reported for perceived COVID-19 challenges and procrastination. Perceived COVID-19 challenges were positively correlated with procrastination, with  $r(458) = .429$ ,  $p < .001$ , and negatively correlated with motivation, with  $r(458) = -.365$ ,  $p < .001$ . In addition, motivation was negatively correlated with procrastination, with  $r(458) = -.471$ ,  $p < .001$ .

The correlation findings revealed that older students tended to have a higher level of motivation; however, the association was low. Students who experienced higher perceived COVID-19 challenges tended to procrastinate more often and were less motivated. The degree of the association was statistically significant. In addition, motivated students tended to procrastinate less than students with less motivation. The degree of the association was moderate (Table 1).

Table 1: Descriptive Statistics and Correlations

Variables	<i>n</i>	<i>M</i>	<i>SD</i>	1	2	3
Age	458	21.49	4.26			
Perceived COVID-19 Challenges	458	3.71	1.01	.10		
Motivation	458	3.11	1.15	.132**	-.365**	
Procrastination	458	3.06	1.25	-.030	.429**	-.471**

Note. *M* = Mean, *SD* = Standard Deviation. \*\* $p < 0.01$ ; \* $p < 0.05$

To test the role of gender on perceived COVID-19 challenges, motivation and procrastination, an independent-samples t-test was conducted. Table 2 reveals significant mean differences in motivation, with  $t(456) = 3.15$ ,  $p < .005$ . The findings showed that female students reported higher levels of motivation ( $M = 3.18$ ,  $SD = 1.14$ ) than male students ( $M = 2.76$ ,  $SD = 1.11$ ). Cohen's *d* was 0.37, indicating a medium effect size. The findings revealed non-significant mean differences in perceived COVID-19 challenges, with  $t(456) = .74$ ,  $p > .005$ , and procrastination, with  $t(456) = 1.21$ ,  $p < .005$ . The value of Cohen's *d* was 0.09 for perceived COVID-19 challenges and 0.15 for procrastination, indicating small effect sizes.

Table 2: Mean Comparison of Gender on Motivation, Perceived COVID-19 Challenges and Procrastination

Variables	Females		Males		<i>t</i> (456)	<i>p</i>	Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Perceived COVID-19 Challenges	3.73	1.04	3.64	.91	.744	.457	.09
Motivation	3.18	1.14	2.76	1.11	3.15	.002	.37
Procrastination	3.02	1.26	3.21	1.21	-1.28	.202	.15

3.2 Linear multiple regression results

A multiple linear regression was calculated to test if perceived COVID-19 challenges and motivation significantly predicted procrastination among students. The results of the regression model indicated

that the  $R^2$  value of .31 showed that the predictors explained 31% of the variance in the outcome variable, with  $F(2, 455) = 102.14, p < .001$ . The effect size of the regression analysis was Cohen's  $f^2 = 0.45$ , which suggests a large effect size. The findings revealed that perceived COVID-19 challenges ( $\beta = .39, p < .001$ ) and motivation ( $\beta = -.38, p < .001$ ) predicted procrastination. Students' perceived COVID-19 challenges and motivation contribute significantly to their levels of procrastination (see Table 3).

**Table 3:** Linear Multiple Regression Results for Motivation and Perceived Challenges on Procrastination

Variables	B	SE	t	p	95% CI
Constant	2.79	.29	9.68	.000	[2.22, 3.36]
Perceived COVID-19 Challenges	.39	.05	7.47	.000	[.288, .494]
Motivation	-.38	.46	-8.18	.000	[-.469, -.287]

Note. CI = Confidence Interval

#### 4. Discussion

During the COVID-19 pandemic, many studies have explored the processes of motivation and transition to online learning in students in many different countries, giving valuable insight into factors of motivation, adjustment and achievement of students all around the world. The current study aims to contribute to the existing literature by examining the relationships between motivation, perceived COVID challenges, procrastination and sociodemographic factors of age and gender of students in the Albanian context.

The results revealed that motivation was negatively linked with perceived COVID-19 challenges and procrastination, while perceived COVID-19 challenges and procrastination were positively correlated. Highly motivated students showed lower levels of perceived challenges and procrastination and vice versa. Furthermore, the results of the study revealed that motivation and perceived COVID-19 challenges impacted students' procrastination levels. Students showing higher levels of motivation and lower levels of perceived COVID-19 challenges were less likely to procrastinate on their academic tasks. These findings are supported by other empirical studies that suggest that maintaining learning motivation during challenging times protects students from maladaptive mechanisms, such as procrastination (Maatuk et al., 2022; Melgaard et al., 2022; Pelikan, Lüftenegger et al., 2021a/b; Tulaskar & Turunen, 2022). Based on the theory of self-determinism (Deci & Ryan, 2000; Ryan & Deci, 2000), students who perceive challenges as out of their control in the COVID-19 pandemic could be more prone to procrastination because it may threaten their autonomy and consequently could have detrimental effects on learning motivation. In the current study by Holzer et al. (2021), the findings revealed that supporting students' autonomy in online learning decreased their procrastination tendencies. On the other hand, students who perceived COVID-19 challenges as being within their control could be more autonomous in their learning processes and more motivated toward achieving goals, consequently showing less procrastination. Perceived COVID-19 challenges may have the role of mediator in the relationship between motivation and procrastination. In a study, Pavin Ivanec (2022) reveals that perceived challenges caused by the COVID-19 pandemic are a mediating factor in learning difficulties and adjustment to online studying. However, in this study, we did not account for the self-control and autonomous feelings of students when facing learning challenges during the COVID-19 pandemic, and further studies could test this hypothesis.

In the current study, the sociodemographic factors of age and gender were relevant with regard to learning motivation but not with regard to perceived COVID-19 challenges and procrastination. First, age was positively related to motivation, suggesting that older students tend to have higher motivation; this could be interpreted by considering the theory of self-determinism, specifically the

role of goal commitment in motivation (Ryan & Deci, 2000). Older students may have stronger goal commitments than younger students (see Kroger, Martinussen, & Marcia, 2010), and they could be in a more established state of identity formation, which subsequently enhances their motivation for goal achievement. However, future studies are needed to examine age and learning motivation with regard to goal commitment and the identity process to better understand this relationship.

Second, gender differences revealed that female students reported higher learning motivation than male students. The current literature shows mixed results regarding gender differences in learning motivation. Some studies have revealed that male students have higher learning motivation than female students, specifically in courses such as mathematics, physics, and those that are more stereotyped for men than women (Eddy & Brownell, 2016; Liou et al., 2021). For example, in a longitudinal study by Marshman et al. (2018), females reported lower motivational characteristics than males in a physics course. Nevertheless, other studies have reported gender differences between males and females on motivation in maths courses but not in other courses (e.g. language; Hyeder, Weidinger, & Steinmayr, 2021), while in a recent meta-analysis study which examined gender differences in motivation in e-learning settings across many countries, no significant results were found in e-learners' motivation (Yu & Deng, 2022). Furthermore, a recent study examining gender differences in motivation during the COVID pandemic among Jordanian students revealed that females had higher intrinsic motivation than male students (Ajlouni et al., 2022). The results of the current study suggest the same trend: females showed higher learning motivation than males. The students in the current study came from different programmes and disciplines, and female students were representative of mathematics, electronics and natural sciences programmes. During the COVID-19 pandemic, male students could have experienced higher demotivation than female students. These results could reflect a trend related to the COVID-19 pandemic with regard to gender differences (see Hsiao, 2021) or changes in different cultural contexts (see Yu & Deng, 2022), and gender differences in motivation could be sensitive to the cultural context. Future studies could examine the role of gender in the context of culture, the COVID-19 pandemic and the drastic changes related to this period or to distance learning, which may motivate female and male students differently. One of the limitations of this study is the underrepresented number of male students compared with that of female ones. Future studies, particularly in Albania, should consider a more representative sample of male students. However, in Albanian Universities, the number of female students is much higher than that of male students, and it is therefore challenging to have a representative sample of male students.

## 5. Conclusions

This study extends the literature on learning motivation during pandemics in different cultural contexts. The findings are relevant to examine influential factors such as motivation and perceived COVID-19 challenges on procrastination and explore further hypotheses for students' motivational process by taking into consideration age and gender factors. The findings support practices in services and interventions in education settings that are sensitive to the COVID-19 pandemic effects on students' motivation and promote resilience when facing transitions during unstable times.

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