



Perceived Competence, Positive Affect, and Anxiety in Students' Academic Motivation: A Hierarchical Regression Study

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Annotation. This study examines the associations between students' perceived competence, positive affect, anxiety, and academic motivation. Data from 458 students were analyzed using hierarchical multiple regression. Anxiety was negatively related to motivation when examined alone, whereas perceived competence and positive affect showed strong positive associations with motivation. Anxiety showed a small positive correlation when associated with perceived competence and positive affect. Interaction effects were not significant.

Keywords: *students' perceived competence, positive affect, student anxiety, academic motivation.*

Introduction

Academic motivation is a multi-faceted process that is triggered by various factors, including intrinsic ones like cognitive and emotional states. Being motivated is highly impactful in students' learning experiences, since it relates with students' engagement, their persistence in learning, and the way they handle academic demands and overall achievement (Guerin et al., 2011; Wigfield et al., 2021). Anxiety is one of the variables

often associated with motivational processes. In many cases, research has shown that anxiety negatively affects students' motivation. However, several studies show the opposite, which indicates that in certain cases, anxiety can be positively linked with motivation. (Camacho et al., 2021; Luo et al., 2020; Al Majali, 2020). Thus, examining the role of anxiety in motivational processes could help the understanding of how anxiety could support motivation or negatively impact it. This could inform educational practice and advance research in this field.

Additionally, research has demonstrated that relevant factors influencing motivation are students' perceived competence and their emotional experiences, especially positive affect (Klootwijk et al., 2021; Kulakow, 2020). Frequently, students who report perceived feelings of competence and feelings of positive affect show a higher tendency to engage in academic activities, which reinforces an adaptive cycle of motivation. Nevertheless, the relation between perceived competence, anxiety, positive affect, and motivation is still underexplored. Existing literature shows that anxiety can either stimulate motivation or impede it, whereas perceived competence and positive emotions experienced have constantly shown a positive impact. Therefore, investigating the role of perceived competence and positive affect in motivation and how these variables relate with anxiety could improve our understanding of the mechanisms involved in this process. Specifying these associations is important as it can inform interventions that support students in managing anxiety constructively while fostering engagement and persistence.

The current study goal is to examine the moderation of perceived competence and positive affect in relation to anxiety and students' motivation. To achieve this goal, a statistical model of hierarchical regression was used. A sample of 458 students was included in this study with the aim of investigating the role of anxiety in connection to motivation, and whether it influences motivation positively or negatively, which would provide new theoretical insights and inform educational practices.

Literature Review

Theories of Motivation

The process of motivation involves energizing, activating, and directing behavior toward the achievement of goals and is mostly seen as an internal process influenced by internal and external factors (Guerin et al., 2011; Wigfield et al., 2021). Many theoretical perspectives have repeatedly tried to explain the numerous factors influencing motivation. However, there are two important theoretical perspectives that are guiding the present study: arousal theory and self-determination theory (SDT).

Arousal theory posits that performance is influenced by the level of arousal, in which moderate arousal levels can enhance motivation and task involvement, whereas very low

or very high levels impair functioning (Kerr, 1989; Reizenzein, 2017; Yerkes & Dodson, 1908). The arousal perspective gives emphasis to emotions; experiencing different levels of emotional intensity is related to the use of effective or ineffective coping strategies. In the case of anxiety, its intensity could either facilitate or reduce motivation. Whereas SDT focuses on three basic psychological needs, namely relatedness, competence and autonomy, and gratifying these needs is critical in motivational processes (Deci & Ryan, 2008). SDT puts great emphasis on competence, as according to it, when we perceive ourselves as competent, we are more likely to be engaged and persistent in our goals (Bandhu et al., 2024; Kulakow, 2020; Pelikan et al., 2021). Based on these perspectives of motivation, if perceived competence is present, the individual is more oriented toward achieving goals even when anxiety is activated, thus modulating the effects of anxiety. Moreover, SDT analyzes how positive emotions can guide behavior toward persistency in finishing learning tasks. However, when psychological needs are not met, reduced motivation is experienced and also reduced positive affect (Deci & Ryan, 2008). These findings are supported by a series of research (Klootwijk et al., 2021). In one study by Holzer et al. (2021), students with higher levels of competence showed higher persistence and positive affect compared to students with lower perceived competence and lower positive affect, who also showed higher levels of procrastination. Exploring these variables further by adding anxiety as a relevant contributor could improve the understanding of the mechanisms of motivation when anxiety can support engagement and persistence, and the contexts in which the opposite happens.

Perceived Competence, Positive Affect, Anxiety and Motivation

Perceived competence is a critical factor influencing motivation (Kruse et al., 2024; Pelikan et al., 2021). Kulakow et al. (2020) found that students who see themselves as competent are more inclined to set more challenging goals for themselves and maintain effort even in instances where they face challenges to these goals. Research conducted with large samples has revealed that competence is a very influential factor for motivation, particularly internal motivation (Bureau et al., 2022). Holzer et al. (2021) investigated perceived competence in connection to negative emotions and found that perceived competence moderated the impact of the latter. At the same time, perceived competence drove motivation by helping students maintain focus under stressful conditions. Thus, feelings of positive emotions can play a relevant role in enhancing motivation (Klootwijk et al., 2021). Positive affect is understood as a blend of confidence, optimism, and an overall sense of wellbeing (Diener et al., 2010; Holzer et al., 2021; Kern et al., 2016). In this study, we use the same definition, which is compatible with SDT in seeing positive emotions as influential in enhancing internal motivation (Deci & Ryan, 2008; Holzer et al., 2021). This view is supported by research evidence according to which positive affect boosts motivation and achievement (Holzer et al., 2021; Klootwijk et al., 2021; Vu et al., 2022).

Along with perceived competence and positive emotions, anxiety is another relevant variable that has been studied extensively. However, the results have been varied, and its role is complex and warrants further investigation. Some research shows the negative effects on motivation (Magelinskaitė et al., 2014), whereas broader studies demonstrate that its effects are subject to its cooccurrence with other variables, with contrastive findings (Brumariu et al., 2023; Camacho et al., 2021; Klootwijk et al., 2021). When combined with low perceived competence, anxiety negatively impacts achievement and increases the probability of school dropout (Brumariou et al., 2023). Also, Zhou and colleagues (2023) revealed that although anxiety has a subtle effect size, it is related negatively with intrinsic motivation.

On the other hand, Luo and colleagues (2020) showed that the negative impact of anxiety on motivation in primary school children is mitigated by its association with social competence. However, in the case of high school students, research evidence indicates that anxiety correlates with low motivation. Whereas Al Majali (2020) found that the presence of anxiety was positively associated with both internal and external motivation, and low anxiety was related with poorer performance. He also distinguished between situational anxiety, which was more effective, and trait anxiety, which was less effective on motivation. Overall, all these results are evidence that in certain conditions and with certain variables, anxiety can affect motivation either positively or negatively, which seems to be influenced by psychological factors.

The above studies clearly show that perceived competence and positive affect impact the effects of anxiety when associated with motivation and academic achievement. Arousal theory implies that levels of anxiety that are moderately experienced can be effective in staying engaged and motivated, and, in contrast, high intensity levels of anxiety or low levels of anxiety could affect motivation negatively. Adding to this perspective, SDT highlights the relevant role of psychological needs that could support motivation, thus supporting the regulation of anxiety. This study is framed around these theoretical perspectives based on emerging evidence and attempts to examine how perceived competence and positive affect relate to anxiety and influence students' academic achievement.

Methodology

The current study used a cross-sectional design with self-reported data in order to investigate how perceived competence and positive affect are associated with anxiety and motivation. This design is effective for investigating psychological constructs and allows for analysis of associations among a diverse student population. To test the study's hypotheses, hierarchical regression analyses were conducted. This statistical model is well-suited for evaluating moderation effects, as it systematically examines

how the interaction between anxiety, competence, and positive affect impacts motivation beyond the individual effects of each variable. By focusing on these interactions, the study seeks to identify when anxiety can actually support students' motivation rather than hindering it.

Participants

Participants in this study were students from both public and private universities in Albania. Half of the participants (50.2%) attended public universities, while 49.8% were enrolled in private institutions. There were 438 students in total, with 68.3% enrolled in undergraduate programs and 31.7% in graduate programs. The sample was drawn from four universities: Aleksandër Moisiu University, Beder College University, Medical University of Tirana, and University of Tirana. The average age of the students was 21.49 years ($SD = 4.26$). The majority of participants were female ($n = 354$), while 84 students (19.2%) identified as male.

Procedure

The study was conducted using an online Google platform, where a unique link was distributed to all participating students via email. Before starting the survey, students provided informed consent and were directed to complete the online questionnaires. Participants first reported their demographic information, followed by the completion of study instruments that had been back-translated for accuracy. Data collection took place between April and May 2020, during the early stages of the COVID-19 pandemic. Although the dataset was collected five years prior to this analysis, it remains pertinent to the present research questions for several reasons. Conducting the study at this time allowed us to capture students' experiences during a particularly challenging academic period, thereby enhancing the significance of the findings. Before answering the survey, students received a brief overview of the objectives of the study and an explanation of the instruments used. All ethical guidelines were strictly followed to ensure voluntary participation, confidentiality, and anonymity throughout the process.

Measures

In the current study, the instruments of intrinsic motivation, positive affect, and perceived competence used in this study were based on those developed by Schober et al. (2020). In the original study, confirmatory factor analyses (CFA) of the measurement models were conducted, and composite reliabilities (CR) of the scales of motivation, positive affect, and perceived competence were analyzed separately for each country of data collection (Holzer et al., 2021). Since the data used in the current study were included in their study, these findings on reliability and validity for motivation, positive affect, and perceived competence are relevant for the current analysis.

Motivation was measured using a 3-item scale derived from Thomas et al. (2018) and Pelikan et al. (2021). Respondents rated each item using a 5-point Likert scale (1 = strongly agree to 5 = strongly disagree), with items recoded during statistical analyses. Cronbach's alpha of the scale was .84. Positive affect was assessed using a 2-item scale. One item was sourced from the Scale of Positive and Negative Experiences (Diener et al., 2010), while the other was from the EPOCH measure (Kern et al., 2016), as modified in the study by Holzer et al. (2021) and utilized in the current research. Perceived competence was measured with three items adapted from the Work-related Basic Need Satisfaction Scale (W-BNS; Van den Broeck et al., 2010), with modifications to align the items with the school context, such as "These days, I am able to successfully complete most of my schoolwork".

Anxiety was assessed using the Generalized Anxiety Disorder-7 (GAD-7; Spitzer et al., 2006), a widely used measure of anxiety symptoms. Participants responded to items on a 5-point Likert scale (1 = strongly agree to 5 = strongly disagree). In the current study, the scale demonstrated excellent internal consistency, with a Cronbach's alpha of .93.

Statistical strategy

In order to examine the relationships between anxiety, perceived competence, positive affect, and motivation in students, a hierarchical regression analysis was conducted using IBM SPSS Statistics. The analysis was carried out in three steps. First, anxiety was entered as the sole predictor variable to evaluate its direct effect on motivation. This initial model allowed for an understanding of the variance in motivation explained by anxiety alone. Second, perceived competence was added to the model to assess its contribution to motivation while controlling for anxiety. The main objective of this step was to examine if perceived competence could reinforce the association between anxiety and motivation. Third, positive affect was included in the final model to examine how it interacts with anxiety and perceived competence in predicting motivation. This hierarchical approach allowed for the assessment of the unique contributions of each variable, thereby providing a comprehensive understanding of their interplay. Multicollinearity was examined through variance inflation factors (VIF; see Table 2), ensuring that predictor variables did not significantly correlate with each other.

Results

Descriptive statistics and correlations were computed prior to performing the hierarchical regression. The average motivation score was $M = 3.11$, $SD = 1.15$; for anxiety, the score was $M = 3.14$, $SD = 1.19$; for positive affect, the score was $M = 3.26$, $SD = 1.07$; and the average student competence score was $M = 3.45$, $SD = 1.02$ (Table 1).

Pearson correlation analysis revealed significant relationships among the variables. Specifically, motivation was positively correlated with positive affect ($r = .71, p < .001$) and competence ($r = .75, p < .001$), indicating that higher motivation is associated with higher perceived positive affect and competence. Conversely, anxiety had a small but significant negative correlation with motivation ($r = -.26, p < .001$). Additionally, competence and positive affect were strongly correlated ($r = .68, p < .001$), while anxiety was negatively correlated with both competence ($r = -.41, p < .001$) and positive affect ($r = -.45, p < .001$) (Table 1).

Table 1
Descriptive Statistics and Pearson Correlations for the Study Variables

Variable	M	SD	1	2	3	4
1. Motivation	3.11	1.15	—			
2. Anxiety	3.14	1.19	-.26**	—		
3. Positive Affect	3.26	1.07	.70**	-.44**	—	
4. Competence	3.45	1.02	.75**	-.41**	.68**	—

Note. $N = 458$. M = mean; SD = standard deviation. Pearson correlation coefficients are presented below the diagonal, with $p < .01$ (two-tailed).

Prior to conducting hierarchical regression analysis, the normality of the variables was assessed using skewness and kurtosis. Student competence showed skewness = -0.27 and kurtosis = -0.92 ; positive affect, skewness = -0.33 and kurtosis = -0.61 ; anxiety, skewness = -0.04 and kurtosis = -1.08 ; and academic motivation, skewness = -0.10 and kurtosis = -0.80 . Although skewness and kurtosis indicated slight deviations from normality, such deviations are generally acceptable for parametric analyses (e.g., Iacobucci et al., 2025).

The Durbin-Watson test assessed the assumption of independence of residuals, yielding a value of 1.898, which falls within the acceptable range. VIFs ranged from 1.0 to 2.48, and tolerance values exceeded 0.4, indicating acceptable levels of multicollinearity in the final model. In addition, condition indices ranged from 1 to 3.34, well below the thresholds for problematic multicollinearity ($CI > 15$). All predictors were mean-centered, including the interaction terms, and no outliers exceeding ± 3 standard deviations were identified. These checks confirmed that the data met the assumptions required for hierarchical regression analysis. A four-step hierarchical regression was conducted to examine the effects of anxiety, competence, and positive affect on motivation.

Table 2
Hierarchical Regression Predicting Motivation

Variables	<i>B</i>	<i>SE</i>	β	<i>R</i> ²	ΔR^2
Step 1					
Constant	3.11***	.05	—	.069	.069
Anxiety	-.25***	.04	-.26		
Step 2					
Constant	3.10***	.03	—	.632	.563
Anxiety	-.01	.03	-.01		
Perceived Competence	.76***	.03	.79		
Step 3					
Constant	3.10***	.03	—	.679	.047
Anxiety	.07*	.03	.07		
Perceived Competence	.57***	.04	.59		
Positive Affect	.35***	.04	.32		
Step 4					
Constant	3.10***	.03	—	.679	.000
Anxiety	.07*	.03	.07		
Perceived Competence	.57***	.04	.59		
Positive Affect	.35***	.04	.33		
Anxiety × Perceived Competence	.00	.03	.01		
Anxiety × Positive Affect	-.01	.04	-.01		

Note. *N* = 458. Unstandardized coefficients (*B*) and standardized coefficients (β) are reported. Predictors were mean-centered prior to computing interaction terms. Predictors were entered hierarchically. $p < .05$. ** $p < .001$.

In the first step, anxiety was entered as the only predictor of motivation. The model was statistically significant, $F(1, 456) = 33.56$, $p < .001$, but accounted for only 6.9% of the variance in motivation ($R^2 = .069$, Adjusted $R^2 = .067$). Anxiety was a negative predictor of motivation ($\beta = -.262$, $p < .001$), indicating that higher levels of anxiety were associated with lower motivation.

In the second step, perceived competence was added to the model. This second model was statistically significant, $F(2, 455) = 391.41$, $p < .001$, explaining 63.2% of the variance in motivation ($R^2 = .63$, Adjusted $R^2 = .63$). This represented a substantial and statistically significant increase in explained variance compared with Model 1 ($\Delta R^2 = .56$, $p < .001$). Perceived competence emerged as a strong positive predictor ($\beta = .79$, $p < .001$), whereas anxiety was no longer significant ($\beta = -.01$, $p = .81$).

In the third step, positive affect was added to the model. The overall model remained statistically significant, $F(3, 454) = 319.95$, $p < .001$, and explained 67.9% of the variance in motivation ($R^2 = .68$, Adjusted $R^2 = .68$). This represented a statistically significant addition of 5% of the explained variance beyond the second model ($\Delta R^2 = .05$, $p < .001$).

In the third model, anxiety, which had been nonsignificant in the second model (see Table 2), emerged as a small but significant positive predictor ($\beta = .07, p = .016$).

In the fourth step, interaction terms between anxiety and perceived competence and between anxiety and positive affect were added to the model. The final model was statistically significant, $F(5, 452) = 191.21, p < .001$, explaining 68% of the variance in motivation ($R^2 = .68$, adjusted $R^2 = .68$). However, the inclusion of the interaction terms did not significantly increase explained variance ($\Delta R^2 \approx .000, p > .05$). Neither the anxiety \times perceived competence interaction ($\beta = .01, p = .9$) nor the anxiety \times positive affect interaction ($\beta = -.01, p = .8$) was statistically significant. In the final model, perceived competence ($\beta = .56, p < .001$) and positive affect ($\beta = .33, p < .001$) remained significant positive predictors of motivation, whereas anxiety showed a small but significant positive association ($\beta = .1, p < .02$). Perceived competence and positive affect were the primary predictors of motivation, while anxiety showed only a small positive effect after controlling for the other variables. No significant interaction effects were observed.

Discussion

The present research contributes to the literature on academic motivation by examining how anxiety, perceived competence, and positive affect interact to influence student motivation. The results point out that the role of anxiety was influenced by perceived competence and positive affect. When anxiety was considered separately, it served as a negative predictor of motivation, which suggests that anxiety could hinder engagement when psychological resources like perceived competence and positive affect are absent. Surprisingly, after the inclusion of perceived competence and positive affect, the direct influence of anxiety on motivation was not only weakened but even became positive, which indicated that these internal resources could change the impact of anxiety on motivation. In accordance with SDT (Deci & Ryan, 2008), perceived competence was identified as an essential psychological need for intrinsic motivation. From what we see from these findings, there is a hierarchical process where perceived competence is highly impactful on positive affect, and their combination leads to higher motivation. Whereas anxiety has a positive association with motivation only when associated with positive affect, implying that this association could help in regulating anxiety levels in ways that are adaptive in maintaining persistence and being motivated. From a theoretical standpoint, this framework could represent a possible mediation model, in which positive affect acts as a regulatory pathway through which the effects of anxiety are experienced. Even though in the current study this mediation model was not tested, this could be a direction for future research. The present findings support the theoretical frameworks from Self-Determination Theory and Arousal Theory.

Self-Determination Theory emphasizes that perceived competence and positive affect together provide the psychological resources necessary for sustained motivation, whereas Arousal Theory suggests that anxiety can enhance or hinder motivation depending on the presence of regulatory factors such as positive affect. Our results support this dual perspective, indicating that anxiety acts as a motivator when positive affect and perceived competence are high, but as an inhibitor when these resources are absent. These findings extend prior research. Consistent with Holzer et al. (2021) and Supriadi et al. (2024), perceived competence is not only a direct predictor of motivation but also may buffer the potentially negative effects of anxiety. Additionally, positive affect combined with social support enhanced motivation, particularly when individuals are facing challenging situations and stress (Klootwijk et al., 2021; Pontes et al., 2024). Even though in the current study, measuring social support was not part of the goal, the current findings indicate that perceived competence and positive affect play a similarly important role in regulating anxiety in order to maintain engagement and motivation.

However, how anxiety is interpreted in this study demands cautious considerations, due to the fact that the way in which anxiety was measured differs compared to other studies. Here, the instrument measured symptoms of it that relate to mental health, while in the other studies mentioned, anxiety was measured specifically in the context of exam anxiety, or situational anxiety, or trait anxiety (Al Majali, 2020; Huntley et al., 2023; Shin et al., 2023). This is important to note because there are differences in anxiety measures in relation to motivation. For instance, moderate exam anxiety or situational anxiety can support motivation and can improve performance by boosting engagement and efforts, but trait anxiety, when at high levels, drastically reduces motivation (Al Majali, 2020; Huntley, et al., 2023; Shin et al., 2023). Different from the previous research, in this study, anxiety was measured as an indicator of psychological distress, not as a specific indicator of distress in school settings in relation to academic achievement, which could explain the small effect size it had when it was examined together with motivation. Future research is needed to investigate further how specific measures of anxiety, such as general anxiety, situational anxiety, exam anxiety or trait anxiety, interact in relation to perceived competence, positive affect, and motivation.

Another relevant point when interpreting the results of this research is related to studies in the current literature that focus on how anxiety influences motivation in younger ages (Camacho et al., 2021). In one study by Magelinskaite et al. (2014), the authors studied primary school children, and they found that anxiety negatively influenced motivation. They interpreted the results based on their stage of development, a critical phase for shaping a sense of competence and the skills for emotion regulation. At this young age, children are in the process of maturing these skills that relate to how they regulate anxiety in an adaptive way. This study has a different sample,

university students, who are mature enough and have developed emotion regulatory skills and a sense of competence at their stage of development. The result supports this by demonstrating that at this age, when perceived competence and positive affect are high, anxiety is also positively associated with motivation, suggesting that students can channel anxiety in a way that does not negatively impact motivation when they perceive themselves competent and experience positive affect. In this context, they can see anxiety as a challenge, which could, in turn, help them maintain motivation and be productive. These results could be relevant for research in the future, particularly research that focuses on the maturation of the sense of competence, emotional regulation skills, anxiety, and motivation, comparing results in different age groups or identifying developmental trajectories of how these psychological resources influence motivation through development.

Furthermore, when compared with the result of Camacho and colleagues (2021), the current results indicate that motivation was negatively influenced by anxiety. However, the study of Camacho et al. (2021) had a different research focus, since its main aim was on external factors influencing motivation, not psychological forces such as perceived competence and positive emotions. Similarly, in their meta-analysis study, Zhou and colleagues (2023) observed that there was a small negative link between anxiety and motivation, but like in Camacho et al. (2021) they emphasized the relevance of situational resources in influencing the link between anxiety and motivation by buffering the negative influence of anxiety on motivation.

Thus, the focus of the above studies has been on the link between anxiety and motivation and how this association is influenced by external forces, which results in a relevant influence. Correspondingly, the current study focuses on the relationship between anxiety and motivation, but it focuses on how this relationship is impacted by psychological resources such as perceived competence and positive affect, which again supports the main tendency that anxiety alone has a small negative effect on motivation, but in combination with either external or internal forces (Kulakow, 2020; Steinberg et al., 2024), it changes direction. Other studies focusing on the link between perceived competence and motivation have consistently demonstrated that perceived competence is an influential factor on motivation. Overall, these results suggest that the link between anxiety and motivation is strongly influenced by external and internal factors, and in the present study, it was revealed that not only perceived competence but also positive affect are highly related with motivation. Moreover, in the effect of these internal variables, anxiety can have a small positive association with motivation. Nevertheless, it should be noted that the interactions of anxiety, perceived competence, and positive affect were not significant. The current findings suggest that students who experience feelings of competence and positive affect also experience anxiety, but in ways that increase motivation rather than reduce it.

Although academic achievement was not measured in this study, the results suggest that the interplay between anxiety, perceived competence, and positive affect may

influence engagement, and that including performance outcomes in future research could clarify under what conditions anxiety acts as a facilitator or inhibitor of motivation. In summary, the present study demonstrates that the impact of anxiety on motivation is not fixed and that it depends on the availability of personal resources such as perceived competence and positive affect. Perceived competence appears to support positive affect, which in turn drives motivation, while positive affect also regulates the effect of anxiety. This study provides insights into the psychological mechanisms of motivation by taking into consideration internal factors, both at the levels of cognition (perceived competence), emotion (positive affect), and anxiety. The results of this study provide a basis for future study to advance research that particularly examines positive affect as a mediator between perceived competence and motivation, as well as the role of anxiety on motivation, which could be linked with our affective states. Finally, future research could further investigate the role of external factors like social support, achievement, and how these factors could relate to personal psychological factors and needs, which would advance the knowledge on the role of anxiety on motivation and how anxiety is modulated based on these factors, thus advancing theoretical frameworks of motivation and improving educational practice to support students' engagement.

Conclusions

In conclusion, the relevance of this study relates to the role that psychological forces, specifically perceived competence and positive affect have in creating a strong foundation for the modulation of anxiety and maintenance of motivation by students. What the results show in a hierarchical way is that perceived competence enhances positive affect, and positive affect enhances motivation. In the same way, positive affect seems to regulate anxiety levels. This cycle of motivation can have important implications for interventions, which in the case of this study apply to educational settings. Based on these results, interventions that target the development of a sense of competence and an enjoyable learning experience could consider anxiety as a feeling that does not disrupt goal-oriented behaviors, but, on the contrary, makes students work harder and put more efforts towards achieving their goals in education processes. Similarly, the results of this study could be relevant for educators. By acknowledging the relevance of psychological factors such as perceived competence and positive affect on motivation, educators can create a setting of positive learning that supports knowledge acquisition in students. This can be done by focusing on supportive assessments that are constructive and that provide opportunities for progress and developing mastery of tasks, in order to give each student a chance to experience success in learning. Through these practices, educators create an environment that is sensitive to

the psychological needs of students to be motivated and to use effective coping strategies, which would help them experience anxiety as a regulatory process that further motivates them towards goal-directed behaviors by being persistent and engaged in the process of learning.

Limitations

There are a few limitations that need to be considered for this study. It is based on a self-report design, which does not directly observe the relevant variables under investigation. As a result, participants may give responses that could be socially accepted but that do not reflect their real experiences (Vu et al., 2022). Another limitation is that the data were collected during an earlier stage of the pandemic, which may limit the applicability of the findings to current educational contexts (Klootwijk et al., 2021). However, the variables that have been used in this study, such as perceived competence, positive affect, motivation, are rather stable in youth populations (Hyland et al., 2022; Kim et al., 2024; Kruse et al., 2024).

As for anxiety, this variable was measured in a sensitive and insecure time, such as the COVID pandemic, where anxiety could have been more heightened. This could be considered as a period of challenges in learning environments, which could be relevant for the aim of this study, as we could better understand how students were motivated during a stressful pandemic time. Thus, even though there is a concern related to data collection during an earlier time, the variables taken into investigation are quite stable in the youth population. In the same way, timing could be favorable for examining the variables of this study, especially anxiety. In this study, we used only one anxiety measure that focuses mostly on mental health symptoms of anxiety, which is different from the existing studies and current literature particularly on academic achievement, as for those studies anxiety is measured mostly as a situational experience or specifically related to exams, and in some cases, measured as a trait (see Al Majali, 2020). Another limitation could be this study's cross-sectional design. Longitudinal studies could give causal insights with regard to the role of perceived competence, positive affect, anxiety and motivation. Additionally, although achievement was not measured in this study, examining achievement could be very relevant in understanding how this motivational process impacts performance (Vu et al., 2022). Last but not least, the study's hierarchical regression model is limited to identifying mediation links between perceived competence, positive affect, anxiety, and motivation, which, with the current results, are mostly theoretical hypotheses that need to be tested in future studies. Longitudinal approaches taking into consideration internal and external forces of motivation could provide an advancement in our understanding of effective and ineffective motivational mechanisms in students.

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Suvoktos kompetencijos, teigiamo afekto ir nerimo poveikis studentų akademinėi motyvacijai: hierarchinės regresijos tyrimas

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Santrauka

Akademinė motyvacija yra labai svarbi siekiant sėkmės moksle. Motyvacija – tai procesas, glaudžiai susijęs su emocinių patirčių reguliavimu. Nerimas dažnai laikomas tuo veiksmu, kuris trukdo studentų motyvacijai, visgi kartais jis gali turėti palaikomąjį poveikį. Šio tyrimo tikslas – ištirti, kaip nerimas ir motyvacija siejasi su suvokta kompetencija ir teigiamu afektu. Tyrime dalyvavo 458 studentai iš valstybinių ir privačių Albanijos universitetų. Remiantis sužadavimo ir apsisprendimo teorija (angl. *Arousal and Self-Determination Theory*) tyrime buvo išbandytas hierarchinis regresijos modelis, siekiant įvertinti nerimą, suvoktą kompetenciją ir teigiamą afektą. Pirmo etapo metu nerimas buvo neigiamai susijęs su motyvacija. Tačiau per antrą etapą, įtraukus suvoktą kompetenciją, ryšys tapo nereikšmingas. Trečio etapo metu, kai buvo įtrauktas teigiamas afektas, nustatyta, kad nerimas teigiamai siejasi su motyvacija, o tai rodo, kad nerimo ir motyvacijos ryšys yra sudėtingas, ir leidžia manyti, jog šis ryšys priklauso nuo sąveikos su psichologiniais veiksniais. Vis dėlto nerimas nesumažino suvoktos kompetencijos ir teigiamo afekto poveikio motyvacijai. Ateityje atliekant daugiau tyrimų reikėtų išbandyti mediacijos modelį, siekiant išsiaiškinti, ar suvokta kompetencija ir teigiamas afektas yra atsakingi už ryšį tarp nerimo ir akademinės motyvacijos.

Esminiai žodžiai: *studentų suvokta kompetencija, teigiamas afektas, studentų nerimas, akademinė motyvacija.*

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