

RESEARCH ARTICLE

The affect between education and cognition for students in a competitive society after the Covid-19

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ABSTRACT

The increasing change and competitive pressure in higher education have raised concerns about student anxiety, especially across different educational pathways. This study examines anxiety among associate degree and bachelor's degree students and explores how educational level and cognitive characteristics are related to anxiety. Using a quantitative, cross-sectional, and non-experimental design, data were collected from 100 third-year students at a Chinese university through standardized questionnaires measuring generalized anxiety and intolerance of uncertainty. Descriptive analysis, group comparison, correlation analysis, and multiple linear regression were conducted to examine patterns of association among the variables. The findings indicate that anxiety levels vary across educational backgrounds and that intolerance of uncertainty is meaningfully associated with students' anxiety when educational level is considered. Although causal inferences cannot be drawn, the results highlight the relevance of both structural educational factors and individual cognitive tendencies in understanding student anxiety. This study provides empirical support for future research employing prospective or intervention based designs to further explore these relationships.

Keywords: Covid-19; student anxiety; cognitive factors; higher education

1. Introduction

COVID-19 impacted countries to varying degrees, which affected education, employment and fertility rates among others. This resulted in a major economic depression. Specifically, because countries were hit by a sudden and unexpected disease, their revenues dropped due to the fall in overall economic activities. This contraction of the economy began with diminishing of basic economic stimulation. Subsequently, widespread effects damaged aggregate production and consumption leading to layoffs and bankruptcies in all sectors, which also caused a rise in unemployment rates. According to estimates by the International Labour Organization¹, global working hours declined by 4.3% in 2021 compared to their previous pandemic levels, which corresponded to about 125 million fewer full-time jobs. A report on the Employment of College Students in the Fall of 2020, released by the ZhiLian Research Institute points out that nearly 60% of students felt employment pressures and were willing to lower their salary expectations in order to get a job². Graduates in

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particular faced unprecedented challenges, causing difficulties for young people around the world, especially Millennials. Furthermore, a mixed study shows that students with a higher education background in Australia faced well-being challenges, mainly from working achievement, housing and day-to-day living costs³.

Regarding the chain reaction of post-epidemic economic recovery, social pressure has caused unprecedented challenges to graduates around the world. As a result, the anxiety and depression have happened to many of them. Much valuable literature has previously studied the causes of depression and anxiety among students, but this literature lacks an exploration of how to provide effective help fundamentally. Based on PSYCAP theory and “cognitive map” theory, this study constructs a model to explore the joint alleviation effect of education and cognition on students to help them adjust when suffering anxiety and pressure, helping students fulfill self-worth. Moreover, it aims to examine the associations between educational level, cognitive variables, and anxiety among students using a quantitative cross-sectional design.

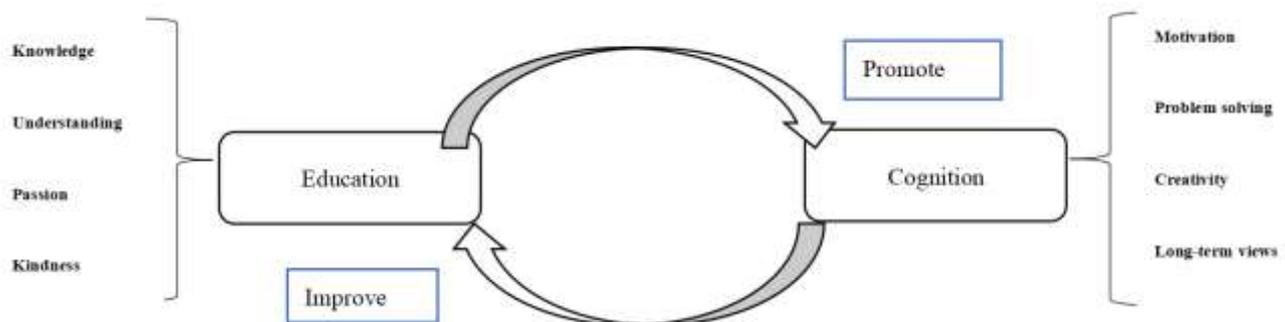


Figure 1.

Stress can be defined as “a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources”⁴. After Covid-19, due to various situations such as population migration, social labor reorganization and families being affected differently by the pandemic, college students have undergone individual changes under the influence of external factors, ranging from major choices, personal future plans and even health anxiety and learning styles have been upended dramatically. The students of today navigate a rapidly changing social environment in which production and competition are increasing, leading to a widening of pressure to balance aspirations with demands from others.

Social pressure can harm college students' physical and mental health and subjective well-being⁵. If pressure is too high or lasts too long, it may also lead to serious psychological and mental diseases such as depression, insanity, and neurosis, as well as a series of behavioral problems such as nightmares, insomnia, and even suicide⁶. Solving stress issues is therefore important to young people in the current time. Thereby, changing the way of thinking to relieve stress is important, and the core driving force of that is education. Adolescent-onset anxiety can predict negative adjustment in work and life as well as diminished familial relationships, lower life satisfaction, ineffectual or inadequate coping skills and an increase in chronic stress⁷. Furthermore, adolescent anxiety has been found to be predictive of substance abuse and/or dependence in adulthood, as well as resulting in insomnia and reduced concentration⁷. Overall, anxiety can affect a person across several domains, including education.

Indeed, statistics produced by the American College Health Association (ACHA, 2019) revealed that indicated that over 63% of college students reported feeling overwhelming anxiety in the past year, while many colleges reported an escalating demand for counseling services⁸.



Figure 2. The data of this flow chart 1-2 is according “*meridian psychiatric partners*” (2019) .

2. Education under different social forms

Students go to school to prepare them for the real world which is changing very fast, but educational system have not adjusted as rapidly. In fact, though leaders from around the world agree that the current system of education was designed in the industrial age, which mainly churned out factory workers, and that this industry of mass production and mass control still runs deep in school. Eurish has provided one of the most comprehensive surveys done on adult education in America⁹. She presents that during this time, education in the industrial age took on the role of a pre-work ritual, which a student was placed in a rigid cycle of custom learning limited to a defined age, and intensely standardized. Students were trained in memory and recitation skills in a purposeful and organized environment in order to complete tests with standard answers. That approach fitted the needs of the time. As we proceed into the information age, the way people access and read information keeps changing. At the juncture between school and real life, college students carry the heavy load of driving change and face even more considerable challenges in this era of educational transformation.

2.1. Education in the industrial age: Taking China as a case

Ancient Chinese education was based on Confucian culture, which balanced moral training and knowledge. It placed a high emphasis on the cultivation of moral ethics and knowledge. Confucian education focuses on the shaping of personal moral cultivation. The goal of education is to cultivate a gentleman, that is, to impart a unified set of values that promotes areas such as benevolence, honesty, and humility to shape ideal individuals and society. On the other hand, traditional education focuses on the cultivation of discipline and order. Students receive education under the supervision of ancient literati and abide by strict learning and behavioral norms, which helps to cultivate students' moral character and self-discipline ability. In addition, Chinese education emphasizes the importance of teacher-student relationships. Teachers are seen as role models for students' lives and learning. The teacher-student relationship is built on respect, trust and legacy. Students respect and obey teachers' instructions. According to Koestner' study that some students praised the systematicness of knowledge acquisition and felt that they could develop good moral character, while others even regarded themselves as crushed by the tremendous pressure to study and struggle for their passion¹⁰.

The traditional standardized education teaching methods in the industrial era provided effective solutions to educational problems under different national conditions, such as rapid and unified training of students in large areas. By contrast, due to the excessive pursuit of strict self-discipline, students formed relatively rigid learning methods and ideas. In this view of education, students only get general knowledge reserves and grades and certificates obtained through learning. Everyone has different passions, strengths, and goals. Célestine found that traditional education stultifies independent thinking, leading many students towards near unanimous answers when faced with questions that require critical thinking¹¹. When children build a Tangram or Lego

and one of the pieces is missing, they stop working; turning to external sources may help them, but few students break through with their own creativity and imagination.

2.2. Progressive education to meet information age

There is a critical issue that social stress happens to young people stepping into work following graduation, and this has become increasingly highlighted since the Covid-19 era. Beyond individual characteristics that are related to experiencing stress, researchers have found that certain situations and life events are highly likely to cause stress for the majority of people, especially situations involving life transitions, situations of high-level ambiguity, and situations of low perceived incontestability¹¹. In 2020, Finland eliminated subject-based education at the primary and secondary school level. And in 2021, roughly 1,500 colleges and universities in North America eliminated SAT/ACT score requirements. Since Covid, education around the world has been shifting and morphing. The coming generation of students, Gen Alpha (born 2010-2025), will encounter an educational landscape that differs substantially from that of previous generations.

Education not only enables people to acquire general knowledge and retelling skills, but also enables students to become independent personalities with critical thoughts. Lotta, Larson and Teresa believes that the students' skills in the 21st Century will need to include creativity, communication and collaboration, research and information fluency, critical thinking and technology concepts¹². Skills for the future are also recommended by John Dewey, who proposed an education "grounded in experience," in which students interact with the "every changing world"¹³. In such a fast-evolving society with unpredictable challenges, students should be prepared to become free thinkers: to explore their favorite or skilled fields, and to deal with obstacles with different kinds of approaches. Take the pandemic aftermath, for instance, students with robust critical thinking tend to turn dilemmas into opportunities, instead of being anxious or disheartened. They can see new opportunities brought by difficulties. To consider the way some Chinese cooking students, during the pandemic, shifted their focus onto nutritional pairings to boost immunity or how art students used drawing and short videos to offer new hope. This is not about following a pre-defined curriculum to fit a tight structure but about empowering people in creative and resilient responses to real-world problems.

3. Cognition

In a broad sense, cognition is the ability of an individual to understand the external environment. Cognition is the process of processing information. In a narrow sense, cognition specifically refers to those operational abilities that enable the subject to acquire knowledge and solve problems. Neisser, the father of cognitive psychology, believed that the core theory of cognition is the information processing model in his book(*Cognitive Psychology*, 1967)¹⁴. He interpreted this model as an electronic computer that accepts input information and outputs results after processing. As shown in **Figure 2-1**, the computer system can map people's cognitive theoretical models. Cognition in a narrow sense refers specifically to the subject's operational ability to acquire knowledge and solve problems. Cognition is the product of the inner psychological activities of human individuals.

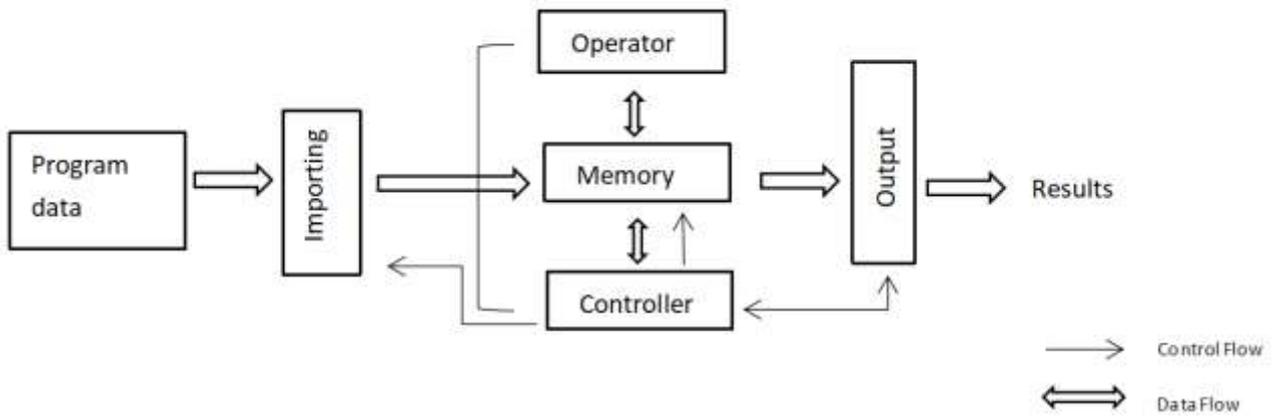


Figure 3. Computer principles 4th ed» (Tang, 2019).

To explain more about this chart via cognition model which would be shown in **Figure 4**

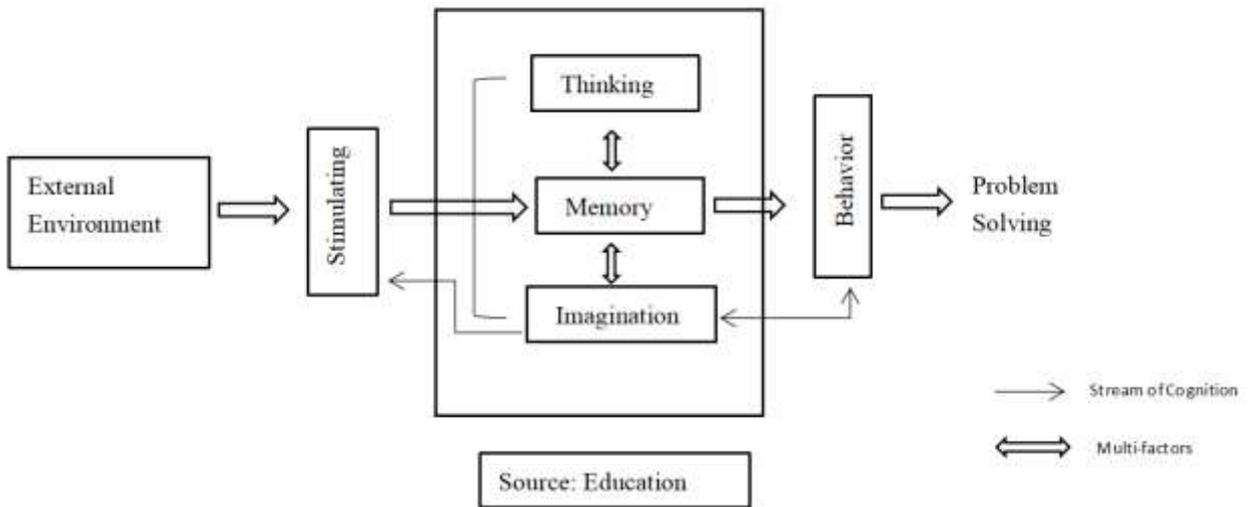


Figure 4. Designed by this research which based on 2-1.

Building on the theory of Tolman, learning eventually results in the formation of a "cognitive map" a broad outline of the immediate environment and an integrated understanding of the situation, charted around the sequence S (Stimulus) - O (Organism changes) - R (Reflection). Thus, it is clear that cognition is at the center of how we represent the external world¹⁵.

Additionally, one of the benefits of cognition for students is stress relief. Higher cognitive abilities can help students better understand and process information, thereby reducing uncertainty and ambiguity and lowering anxiety levels. Anxiety is often caused by fear of the unknown and worry about uncertainty. Students with higher cognitive abilities may be better able to analyze and process complex information and understand the nature and laws of things, thereby reducing fear and worry about unknown things. Lazarus mentioned in American Psychologist that the functional relationship between cognition and emotion is bidirectional¹⁶. The emotional response to an event often emerges from the manner in which individuals cognitively appraise its relevance to their well-being. In essence, cognition exerts a substantial influence on emotion, and emotional states in turn shape cognitive processes. When individuals encounter challenging circumstances, their subjective interpretations largely determine their affective reactions. Appraising an event as threatening or indicative of personal inadequacy is likely to elicit anxiety or depressive affect. Conversely, interpreting the

same event as an opportunity for development increases the likelihood of experiencing enthusiasm and confidence, thereby enabling emotions to facilitate subsequent cognitive engagement. According to psychological research of Tyng et, al, emotions and cognition interact with each other¹⁷. Our cognition influence our emotions, and in turn, our emotions influence our cognition. When faced with a challenge or difficulty, our perceptions directly impact our emotions. If we view this challenge or difficulty as a threat or failure, we may feel anxious or depressed. However, if we can view this challenge or difficulty in a positive way, as an opportunity for growth, we may feel excited and confident.

3.1. Cognition in Education for students who have difficulties suffering

Cognition has traditionally been perceived as a core component in learning processes, especially in terms of how learners engage, process, and respond to learning requirements. Early cognitive theories, which include Locke's views that all knowing comes from experience (1690), as well as Piaget's constructivism model (1952), indicate that learners must actively integrate external knowledge inputs with internal cognition¹⁸. These views see cognition as a pre-requisite for proper learning, especially for learners who face academic or psychological issues.

However, cognition alone does not fully explain how students persist, cope, and adapt when confronted with sustained challenges. In this regard, Psychological Capital (PsyCap) provides a more integrative framework for understanding students' functioning in difficult educational contexts. PsyCap conceptualizes a positive psychological state composed of hope, self-efficacy, resilience, and optimism, representing state-like and developable psychological resources that support goal pursuit, adaptive coping, and well-being¹⁹. From this perspective, cognition serves as a foundational condition that enables PsyCap to operate effectively, while PsyCap shapes how cognitive resources are mobilized under pressure.

This interpretation finds support in empirical evidence. For example, in a research involving 344 participants investigating the factors of both external stimulation and the antecedent components of motivation, Howard found that determined regulation predicted ongoing commitment and forward-looking intentions strongly, with the loss of well-being related to external incentives and pressures where it fueled external regulation of motivation²⁰. This finding aligns with the PsyCap model in suggesting that the cognitive and motivational processes underlying self-efficacy, hope, and resilience are more conducive in the context of student persistence and psychological adjustment than any external form of control.

4. Research questions

RQ1: Is there a significant difference in anxiety levels between students with different educational levels (Associate Degree AND Bachelor's Degree)?

RQ2: Are cognitive variables significantly associated with students' anxiety levels after controlling for educational level?

5. Research methodology and data analysis

It is the purpose of this research paper is to explore the educational and cognitive abilities of students from different educational backgrounds in coping with anxiety. In order to achieve research. Thus, the quantitative research was designed as the research method. Quantitative research aims to minimize researcher bias by using standardized instruments, structured procedures, and describing the relationships and trends among variables²¹. For this study, the measures conducted via questionnaires for the two groups of students at a single instance were analyzed using multiple regression to determine the relationship amongst the variables, and this makes the design of this research both cross-sectional and correlational, classified under non-

experimental research designs. The design tends to aim for reasonably accurate and reliable results whilst offering empirical insights for understanding the relationship amongst the identified variables²². The cross-sectional research consists of systematic observation at specific time as well as a description of the characteristics or properties of objects or events for the purpose of discovering relationships between an independent (predictor) variable and a dependent variable within a population²³.

5.1. Data collection and ethical issues

This study adopted convenience sampling to select research participants. Based on the principles of research feasibility and sample availability, associate degree and bachelor degree students who volunteered to participate during the survey period were recruited. Convenience sampling is commonly used in cross-sectional survey research due to its practicality and accessibility²⁴. A total of 100 participants were ultimately included in the analysis, comprising 50 undergraduate students and 50 associate degree students, maintaining a relatively balanced gender ratio between the two groups. All participants were third-year students from the 2020 graduating class of Shandong Yingcai University.

Students from different educational backgrounds were selected as research subjects. In terms of variable settings, educational level (associate degree/bachelor's degree) is used as a categorical independent variable to distinguish different educational backgrounds; cognitive variables are measured using standardized scales and are used as continuous independent variables; student anxiety level is used as a dependent variable, obtained through a mature anxiety measurement tool. Group A consisted of undergraduate students in their third year of an international program, and Group B consisted of students in their third year of a traditional vocational college program. Gender was equal among the selected groups. Details are as follows. Sample students from Shandong Yingcai College Class of 2020.

Group A: Bachelor (the average score of China's university entrance examination is 500 points and the total score is 700) Accepting diversified international courses/English teaching/student-centered teaching methods, the courses are connected to overseas and the undergraduate level 3 will be connected with British schools to achieve dual-school training.

Group B: Associate degree (the average score of China's university entrance examination is 300 points, with a total score of 700) Traditional education/teacher-centered/paper-based examination as the screening method.

As the ethical issues this research will enable all research data to be stored anonymously. Any data provided in this paper is presented in an anonymized form to avoid identifying certain individuals and is used for academic research purposes only.

5.2. Measures and instruments

This study used the Generalized Anxiety Disorder Scale-7 (GAD-7) developed by Robert L. Spitzer et al²⁵. and the Intolerance of Uncertainty Scale (IUS) by Carleton et al²⁶. A total of 106 questionnaires were distributed; after removing invalid data that 100 valid questionnaires were returned and representing a valid response rate of 94.3%. Moreover, the statistical analyses were conducted using IBM SPSS Statistics (Version 27.0).

5.3. Reliability of the measurement instruments

Reliability tests showed that the Cronbach's α coefficients for GAD-7 and IUS were 0.867 and 0.863, respectively, both meeting the satisfied standard. It indicates that the scale items have good internal consistency in measuring anxiety and uncertainty tolerance among university students.

Table 5-1. Reliability analysis.

| Dimension Name | Cronbach's alpha coefficient | Number of Items |
|----------------------------|------------------------------|-----------------|
| Intolerance of Uncertainty | 0.863 | 12 |
| Current Anxiety Status | 0.867 | 7 |

5.4. Descriptive statistics of study variables

Descriptive statistics were conducted for the scores of IUS and GAD-7 among 100 participants in (Table 5-2). Regarding the GAD-7 scale, the overall mean anxiety score was 12.84 (SD=2.92), suggesting a moderate level of anxiety across the sample. When stratified by educational level, students from associate degree reported a higher mean anxiety score (M = 15.32, SD = 1.51), approaching the threshold for severe anxiety 15 points, whereas bachelor’s degree students showed a lower mean score (M = 10.36, SD = 1.54), remaining within the moderate anxiety range.

Within respect to intolerance of uncertainty, the overall mean IU score was 2.91 (SD = 0.58). Students with associated degree scored higher on IU (M = 3.35, SD = 0.43) than students with bachelor’s degree (M = 2.48, SD = 0.31). Given that higher IU scores reflect lower tolerance for uncertainty, these findings suggest that students with associate degree may experience greater cognitive discomfort when facing uncertain future situations.

Table 5-2. Descriptive analysis.

| Variable name | Group | Number | Mean | SD |
|---------------|-----------------------|--------|-------|--------|
| IU | Associate Degree (0) | 50 | 3.354 | 0.4338 |
| | Bachelor’s Degree (1) | 50 | 2.482 | 0.317 |
| | Total | 100 | 2.912 | 0.58 |
| GAD | Associate Degree (0) | 50 | 15.32 | 1.517 |
| | Bachelor’s Degree (1) | 50 | 10.36 | 1.548 |
| | Total | 100 | 12.84 | 2.92 |

5.5. Group differences in anxiety by educational level

An independent sample t-test was performed to compare the levels of anxiety experienced by associate degree students and bachelor’s degree students. Analysis of the findings showed a significantly different score in anxiety levels between the two categories. the associate degree students experienced higher levels of anxiety, with a mean of 15.32, compared to the means of 10.36 for the other group, $t = 16.17, p < .001$.

Table 5-3. T-test.

| Variable | Group | Case Count | M | t | p |
|---------------|-------------------|------------|-------|-------|-------|
| Anxiety Level | Associate Degree | 50 | 15.32 | 16.17 | 0.000 |
| | Bachelor’s Degree | 50 | 10.36 | | |

5.6. Multiple linear regression analysis of anxiety

Table 5-4 shows that the correlation between IU and GAD was positive and significant ($r = 0.759, p < 0.01$ two-tailed test), indicating that higher levels of intolerance of uncertainty are associated with higher levels of generalized anxiety. On this premise, multiple regression analysis is suggested to investigate a relationship between cognitive and anxiety variables.

Table 5-4. Pearson correlation analysis.

| Variable | IU | GAD |
|----------|---------|-----|
| IU | 1 | |
| GAD | 0.759** | 1 |

**Statistical significance was confirmed at the 0.01 level (two-tailed).

In constructing the multiple regression model, education level (X1) and uncertainty tolerance (X2) were used as independent variables, and current anxiety state was used as the dependent variable (Y). The regression results showed that the model was statistically significant overall, $F = 151.545$, $p < 0.001$, with an explanatory power of $R^2 = 0.758$ and an adjusted R^2 of 0.753 . The regression coefficients indicated in table 5-5, controlling for other variables, education level was negatively associated with anxiety level, while uncertainty tolerance was positively associated with anxiety level. Based on the unstandardized regression coefficients, the regression equation can be expressed as: $Y = 10.822 - 3.791X1 + 1.341X2$

Table 5-5. Multiple linear regression.

| Variable | B | Standard Error | Beta | t | Significance |
|------------|--------|----------------|--------|--------|--------------|
| (Constant) | 10.822 | 1.313 | | 8.243 | 0.000 |
| 1 EL | -3.791 | 0.445 | -0.652 | -8.515 | 0.001 |
| IU | 1.341 | 0.387 | 0.266 | 3.469 | 0.000 |

In this research, multiple linear regression analysis was used to explore the relationship of educational level and uncertainty tolerance in predicting the students' current level of anxiety. The finding (**Table 5-5**) suggests a positive relationship between uncertainty tolerance (IU) and the presence of generalized anxiety disorder (GAD) ($\beta = 0.266$, $t = 3.469$, $p < 0.01$), indicating a higher level of anxiety for the students with low levels of tolerance for uncertainty. However, there is a negative relationship between educational levels and anxiety ($\beta = -0.652$, $t = -8.515$, $p < 0.01$), indicating a higher level of educational attainment is associated with a lower level of anxiety.

As a conclusion, there is a significant relationship between educational levels and anxiety levels, and another between levels of uncertainty tolerance and anxiety levels, when considering both factors for prediction.

6. Discussion

This study adopted a quantitative, cross-sectional, and non-experimental research design to examine the associations between educational level, intolerance of uncertainty, and anxiety among university students. The use of a cross-sectional survey allowed for efficient data collection from students with different educational backgrounds at a single point in time, providing a snapshot of cognitive and emotional characteristics within the target population. This design was appropriate for addressing the research questions, which focused on identifying group differences and examining statistical associations rather than establishing causal relationships.

The use of standardized self-rating scales, such as the GAD-7 and the Uncertainty Tolerance Scale, certainly added to the reliability and comparability of the data gathered. Both of these scales have shown good internal consistency within the sample, indicating the applicability of both tools to this particular research. The usage of multiple linear regression also allowed us to analyze the level of education and cognitive elements collectively, allowing us to determine the influence of both on anxiety, considering multiple predictors combined within a single model.

Nevertheless, there are methodological limitations should be acknowledged. First, the use of convenience sampling may limit the general applicability of the findings beyond specific institutional and demographic contexts. Second, the cross-sectional nature of the data limits the interpretation of temporal or causal relationships between variables; the observed associations reflect relationship patterns rather than directional effects. Third, relying on self-reported data may introduce common methodological bias and be influenced by participants' transient emotional states when completing the questionnaire.

Despite these limitations, this methodology provides meaningful empirical insights into how educational background and cognitive predisposition are statistically associated with anxiety among college students. Studies in the future may further examine these associations and explore underlying mechanisms by employing longitudinal designs or structural equation modeling.

7. Conclusion

In the rapidly developing information age, education is undergoing a transformation, from the industrial age's pursuit of process/content certainty and result standardization to education in the information age, which provides more personalized and student-centered education in the electronic information dimension. of teaching Way. In the information age, society's demand for talents has also changed. The traditional education model that focuses on knowledge and memory can no longer meet the needs of society. On the contrary, it pays more attention to talents with comprehensive abilities such as critical thinking, innovation ability, and information literacy. Cognitive ability is the joint product of the interaction of multiple abilities. . The social anxiety brought to the new generation by the economic recovery after the epidemic in 2019 not only requires individual students to make active adjustments, but also requires educators to update educational methods during the teaching process to help students find personal passion in free and liberating education. . In the face of difficulties and adversity, we can find the light of hope through adjustment strategies of our own cognitive abilities.

This study is only used as an academic reference to provide valuable educational materials for all educators. It is hoped that all students who are experiencing difficulties and fighting anxiety can find things of interest to them in the rapidly changing society as a motivation to keep moving forward. All experiences are the storage of students' rich representations to open up a broader perspective.

Conflict of interest

The authors declare no conflicts of interest.

References

1. International labour Organization 2021, Employment impact of the pandemic worse than expected.
2. Yang S, Yang J, Yue L, Xu J, Liu X, Li W, Cheng H, He G. 2020, Impact of perception reduction of employment opportunities on employment pressure of college students under COVID-19 epidemic-joint moderating effects of employment policy support and job-searching self-efficacy. *Front Psychol*.
3. Cassells, R., Dockery, A.M., Duncan, A., Kiely, D., & Mavisakalyan, A. (2023). Youth in Focus: Navigating wellbeing in a changing world. Bankwest Curtin Economics Centre.
4. Folkman S, Lazarus RS. 1985, If it changes it must be a process: study of emotion and coping during three stages of a college examination, *J Pers Soc Psychol*, vol. 48, no.1, pp.50–70.
5. Yang S, Yang J, Yue L, Xu J, Liu X, Li W, Cheng H, He G. 2020, Impact of perception reduction of employment opportunities on employment pressure of college students under COVID-19 epidemic-joint moderating effects of employment policy support and job-searching self-efficacy. *Front Psychol*.
6. Tang, J., & Sun, S. (2021). Analysis on the psychology of “slow employment” of college students and the countermeasures of employment guidance in the post epidemic era. *Journal of Hubei Open Vocational College*, 34(12), 48–49.

7. Essau, C. A., Lewinsohn, P. M., Olaya, B., & Seeley, J. R. 2014, Anxiety disorders in adolescents and psychosocial outcomes at age 30, *Journal of Affective Disorders*, vol. 163, pp. 125-132.
8. American College Health Association. (2019). American College Health Association-National College Health Assessment II: Reference Group Executive Summary Spring 2019. American College Health Association.
9. Eurich, N. P. (1990). *The learning industry: Education for adult workers*. The Carnegie Foundation for the Advancement of Teaching.
10. Verner-Filion, J., Schellenberg, B. J., Holding, A. C., & Koestner, R. 2020, Passion and grit in the pursuit of long-term personal goals in college students, *Learning and Individual Differences*, pp.83.
11. Sarafino, E. P. & Smith, T. W. 2011, *Health psychology: Biopsychosocial interactions* (7th ed.). Wiley.
12. Larson, Lotta & Miller, Teresa. 2011, *21st Century Skills: Prepare Students for the Future*, *Kappa Delta Pi Record*, vol.47, pp.121-123.
13. Johnson, S.D. and Reed, S.R. 2008, An instructional strategy framework for online learning environments, *New Directions for Adult and Continuing Education*, vol.100, pp.31-43.
14. Neisser, U. (1967). *Cognitive psychology*. New York: Appleton Century Crofts.
15. Tolman, E. C. (1948). Cognitive maps in rats and men. *Psychological Review*, 55(4), 189–208. <https://doi.org/10.1037/h0061626>
16. Lazarus, R. S. (1991). Cognition and motivation in emotion. *American Psychologist*, 46(4), 352–367.
17. Tyng, C. M., Amin, H. U., Saad, M. N., & Malik, A. S. (2017). The influences of emotion on learning and memory. *Frontiers in Psychology*, 8, 1454
18. Piaget, J. (1952). *The origins of intelligence in children*. New York: International Universities Press.
19. Luthans, F., Youssef, C. M., & Avolio, B. J. (2007). *Psychological Capital: Developing the Human Competitive Edge*. Oxford University Press.
20. Howard, J. L., Bureau, J. S., Guay, F., Chong, J. X., & Ryan, R. M. 2021, Student motivation and associated outcomes: A meta-analysis from self-determination theory, *Perspectives on Psychological Science*, vol. 16, no.6.
21. Burns, N., & Grove, S. K. 2005, *The Practice of Nursing Research, Conduct, Critique, Utilization* (5th Ed.). St Louis: Elsevier.
22. Rahman, S. 2017, The Advantages and Disadvantages of Using Qualitative and Quantitative Approaches and Methods in Language "Testing and Assessment" Research: A Literature Review, *Journal of Education and Learning*, vol.6, no.1, pp.102-112.
23. Cummings, C. L. (2018). Cross-sectional design. *The SAGE Encyclopedia of Communication Research Methods*. Thousand Oaks: SAGE Publications Inc. Retrieved.
24. Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1–4.
25. Spitzer, R. L., Kroenke, K., Williams, J. B. W., & Löwe, B. (2006). A brief measure for assessing generalized anxiety disorder: The GAD-7. *Archives of Internal Medicine*, 166(10), 1092–1097.
26. Carleton, R. N., Norton, M. A. P. J., & Asmundson, G. J. G. (2007). Fearing the unknown: A short version of the Intolerance of Uncertainty Scale. *Journal of Anxiety Disorders*, 21(1), 105–117.