

English Language Learning Anxiety as a Moderator of Cognitive Flexibility and Psychological Well-Being among University Students Post-COVID-19

Montaser Adel Sayed Ahmed^{*1}

¹New Valley University, Arab Republic of Egypt

*Corresponding Author Email: montaser198622@gmail.com

Received: 30/04/2026, Revised: 05/07/2026, Accepted: 05/07/2026, Published: 09/07/2026

Abstract:

This study examined whether English language learning anxiety moderates the relationship between cognitive flexibility and psychological well-being among Egyptian university students in the post-COVID-19 era, grounded in Conservation of Resources theory and the Job Demands-Resources model. Using a descriptive correlational design, a stratified random sample of 800 undergraduates ($M = 20.8$, $SD = 1.6$) completed validated online measures of cognitive flexibility, psychological well-being, and English learning anxiety, all demonstrating strong reliability (Cronbach's $\alpha = 0.88$, 0.91 , and 0.87 , respectively). Pearson correlations revealed that cognitive flexibility was positively associated with psychological well-being ($r = 0.56$, $p < 0.001$), while English anxiety was negatively associated with it ($r = -0.49$, $p < 0.001$). Hierarchical regression showed a significant interaction effect ($\beta = -0.23$, $t = -4.12$, $p < 0.001$, $\Delta R^2 = 0.05$), indicating that anxiety moderates the flexibility–well-being link. Simple slopes analysis confirmed that the beneficial effect of cognitive flexibility on well-being was substantially weaker at high anxiety levels (slope = 0.26 , $p < 0.01$) compared to low anxiety levels (slope = 0.64 , $p < 0.001$)—a reduction of over 59% in effect size. These findings suggest that cognitive flexibility alone may not sufficiently protect students' mental health when language anxiety is elevated, as high anxiety appears to deplete the psychological resources that flexibility would otherwise mobilize. Practically, this underscores the need for integrated interventions that simultaneously enhance cognitive adaptability and reduce language-specific anxiety, rather than addressing either factor in isolation. University mental health programs and language educators should collaborate to design supportive environments that alleviate evaluation-related fears, thereby enabling students to fully benefit from their cognitive strengths. Overall, this study contributes to understanding how contextual affective factors can constrain or enable the protective role of cognitive resources in academic settings, offering actionable insights for post-pandemic student support strategies.

Keywords: Cognitive Flexibility, Psychological Well-Being, English Language Learning Anxiety, University Students, Moderation.

1. Introduction

The COVID-19 pandemic created an unprecedented global health crisis between 2020 and 2022, and its effects extended far beyond physical health to deeply impact the mental health of individuals and communities. Young people, especially university students, were particularly hard hit due to repeated university closures, the abrupt shift to remote learning systems, the loss of direct social interaction, and prolonged uncertainty about their academic and professional futures (Okaya, 2024). Studies conducted during and after the pandemic have shown that levels of anxiety, depression, and psychological distress increased significantly among higher education students (Hemi, 2024). In this context, attention turned to examining protective factors that could mitigate these negative effects, and one of the most prominent of these factors was cognitive flexibility (Wang, 2025).

Cognitive flexibility is defined as an individual's ability to adapt their thinking and behavior in response to changing environmental demands, to perceive available alternatives, and to shift between different cognitive strategies as the situation requires (Circir, 2024). The literature indicates that individuals with high cognitive flexibility are better able to reinterpret stressful situations positively and are less prone to negative rumination



(Akyıl, 2025). Numerous studies conducted in the post-pandemic period have confirmed a strong positive relationship between cognitive flexibility and psychological well-being across diverse age groups and contexts, including university students, teachers, and patients (Sarpdağı, 2025). Previous research has also demonstrated that cognitive flexibility plays both predictive and mediating roles in enhancing psychological well-being (Yousefi Afrashteh, 2022; Tamannaefar, 2026; Wang, 2025). However, a crucial question that has not received sufficient attention is whether cognitive flexibility remains equally effective for all students, or whether certain factors may weaken its protective effect.

One of the most likely factors in the university environment is English language learning anxiety (Kazemi, 2026). English is the primary medium of instruction in many faculties within Egyptian universities, and passing English language tests is a graduation requirement (Yuksel, 2023). However, this linguistic academic environment creates significant pressure for a large proportion of students who were not intensively exposed to English in their pre-university education (Hu, 2024). Contemporary researchers define English language learning anxiety as a negative emotional state characterized by fear of speaking in front of others, avoidance of language communication situations, test tension, and fear of failure (Kazemi, 2026). Recent studies have shown that the prevalence of this anxiety among university students ranges between 55% and 65%, and it is negatively associated with academic achievement and self-efficacy (Naibaho, 2022). More importantly, this anxiety consumes a significant portion of students' limited cognitive resources, such as attention and working memory (Chen, 2022). Chen (2022) found that students with high anxiety showed greater cognitive load and poorer performance, and Hsu (2024) found that language anxiety reduces the effectiveness of self-regulation strategies in vocabulary learning. Dadaboev and Anis (2025) pointed out that language anxiety can lead learners to avoid language situations, depriving them of practice opportunities and creating a vicious cycle of increasing anxiety.

Drawing on Conservation of Resources theory (Fan, 2026) and the Job Demands-Resources model (Reintjes, 2025), it can be hypothesized that English language learning anxiety represents a demand that depletes resources, thereby reducing the student's ability to effectively deploy cognitive flexibility when facing general life stressors. According to Conservation of Resources theory, resource loss reduces the effectiveness of remaining resources, and according to the Job Demands-Resources model, high demands (such as language anxiety) weaken the effect of available resources (such as cognitive flexibility). Therefore, the positive relationship between cognitive flexibility and psychological well-being is expected to be weaker among students with high levels of language anxiety compared to those with low levels (Shao, 2025)..

2. Research Questions and Hypotheses:

Based on the research problem identified above, this study aims to answer the following questions:

Research Question 1: What are the levels of cognitive flexibility, English language learning anxiety, and psychological well-being among Egyptian university students in the post-COVID-19 era?

Research Question 2: Is there a significant positive relationship between cognitive flexibility and psychological well-being among university students?

Research Question 3: Is there a significant negative relationship between English language learning anxiety and psychological well-being among university students?

Research Question 4: Does English language learning anxiety moderate the relationship between cognitive flexibility and psychological well-being among Egyptian university students in the post-COVID-19 era?

To test these questions, the following null and alternative hypotheses were formulated (at the 0.05 significance level):

Hypothesis 1 (H₁): There is a significant positive relationship between cognitive flexibility and psychological well-being among university students.

(H₀₁): There is no significant positive relationship between cognitive flexibility and psychological well-being.

Hypothesis 2 (H₂): There is a significant negative relationship between English language learning anxiety and psychological well-being among university students.

(H₀₂): There is no significant negative relationship between English language learning anxiety and psychological well-being.

Hypothesis 3 (H₃): English language learning anxiety significantly moderates the relationship between cognitive flexibility and psychological well-being among university students.

(H₀₃): English language learning anxiety does not moderate the relationship between cognitive flexibility and psychological well-being (i.e., the interaction coefficient equals zero).

3. Literature Review

3.1 Cognitive Flexibility and Psychological Well-Being

Cognitive flexibility is a higher-order cognitive ability that allows an individual to switch between different mental tasks, generate alternative solutions to problems, and adapt behavior according to situational changes (Bonacquisti, 2024). It has been described as the cornerstone of successful psychological adaptation to stress (Birni, 2025). In the post-pandemic period, numerous studies with large and diverse samples have confirmed the protective role of cognitive flexibility in enhancing psychological well-being.

For instance, Okaya (2024) studied 2,280 participants aged 11 to 89 years and found that psychological flexibility (a concept close to cognitive flexibility) was a strong predictor of mental health across all age groups. A longitudinal investigation by Hemi (2024) of 571 individuals over 13 months showed that those with low cognitive flexibility were approximately three times more likely to belong to a chronic anxiety and depression trajectory compared to those with high flexibility. In a study of 232 adolescents over three months, Akyl (2025) proved that cognitive flexibility mediated the relationship between pessimism and subjective well-being. Kiye (2024) surveyed 312 university students and found that cognitive flexibility was positively associated with psychological well-being through the mediating role of cognitive emotion regulation, specifically via positive reappraisal and planning. Nakhostin-Khayyat (2024) studied 302 students and found that cognitive flexibility mediated the relationship between self-regulation and resilience. In an educational context, Gilar-Corbi (2024) found that cognitive flexibility significantly contributed to explaining variance in psychological well-being among 338 trainee teachers. Sarpdağı (2025) confirmed that cognitive flexibility was the most important predictor of psychological well-being among nursing students.

These findings are all consistent with Conservation of Resources theory, which states that personal resources such as cognitive flexibility enable individuals to protect their other resources and acquire new ones, leading to higher well-being (Fan, 2026). They are also consistent with the Job Demands-Resources model, which posits that personal resources buffer the negative effects of job demands on mental health (Reintjes, 2025).

3.2 English Language Learning Anxiety and Cognitive Resource Depletion

English language learning anxiety is a situation-specific type of anxiety, defined by contemporary researchers as a set of negative emotional responses (fear, tension, embarrassment, worry) that appear in learners when they are exposed to situations requiring the use of English, especially in the classroom or during examinations (Kazemi, 2026). This anxiety consists of three main dimensions: communication anxiety (fear of speaking or understanding), test anxiety (fear of failing exams), and fear of negative evaluation (worry about others' opinions) (Zheng, 2026).

Recent research has shown that this anxiety is common in contexts where English is taught as a foreign language, with prevalence rates exceeding 60% in some studies (Sugandi, 2026). Naibaho (2022) indicated that anxiety is a primary factor in students' failure to learn English. Hikmah and Kholis (2025) found that students with high anxiety tend to avoid speaking in class. Deitcher and Alon (2025) also pointed out that language anxiety can be an additional source of psychological stress in academic contexts.

The primary mechanism through which language anxiety affects performance and well-being is the depletion of cognitive resources. According to cognitive load theory, individuals have a limited capacity for processing

information in working memory (Chen, 2022). When an individual is in a state of high anxiety, a large portion of these resources is directed toward self-monitoring and negative thoughts about language, thereby reducing the resources available for effective cognitive processing. Chen (2022) showed that students with high anxiety exhibited greater cognitive load and poorer performance. Hsu (2024) found that language anxiety reduces the effectiveness of students' self-regulation strategies. Dadaboev and Anis (2025) pointed out that language anxiety can lead learners to avoid language situations, depriving them of practice opportunities and creating a vicious cycle of increasing anxiety.

What matters for the current study is that language anxiety, as a cognitive resource drain, reduces the mental capacity available for students to apply their cognitive flexibility to other (non-language) life stressors. This interpretation is consistent with the Job Demands-Resources model, which posits that high demands (such as language anxiety) weaken the effect of available resources (such as cognitive flexibility) (Reintjes, 2025; Shao, 2025).

4. Methodology:

4.1 Research Design:

A correlational descriptive design was adopted, which is the most appropriate design for testing correlational and moderation hypotheses among psychological variables without experimental manipulation (Alsaif, 2024). The study was conducted between November 2025 and January 2026.

4.2 Sample:

The target population consisted of all undergraduate students enrolled in Egyptian public universities during the 2025-2026 academic year. A stratified random sampling method was employed to ensure representativeness across institution types and academic disciplines.

Participating Institutions: The sample was drawn from three Egyptian public universities located in different geographical regions: Cairo University (Lower Egypt), Assiut University (Upper Egypt), and Alexandria University (Coastal region). This selection aimed to capture regional diversity in educational contexts and English language exposure, as levels of English proficiency vary among students from different regions due to disparities in pre-university education quality and available resources.

Stratification Criteria: Stratification was based on two key variables:

1. **University Type:** Public universities only (to maintain homogeneity of educational context, as all Egyptian public universities follow the same academic regulations and admission standards).
2. **Academic Discipline:** Students were stratified across three broad disciplinary categories: Humanities and Social Sciences ($n = 280$), Natural Sciences and Engineering ($n = 260$), and Health Sciences ($n = 260$). These classifications were selected because they reflect the natural distribution of students in Egyptian universities, and each has different language requirements.

Sampling Procedure: Within each stratum, departments were randomly selected, and students were invited to participate via official university email lists and learning management systems. The invitation included a brief description of the study and a link to the electronic questionnaire. Two weekly reminders were sent to increase the response rate.

Sample Size: The required sample size was determined using the Krejcie and Morgan formula (1970), with a 95% confidence level and 3% margin of error. Based on an estimated target population of approximately 3 million Egyptian university students, the formula yielded a recommended sample size of 1,067. However, accounting for an anticipated 25% attrition rate, we distributed the questionnaire to 1,100 students. A total of 812 students completed the questionnaire, yielding an initial response rate of 73.8%. After data cleaning (checking for incomplete responses or those showing random response patterns), 12 incomplete responses were excluded, resulting in a final analytic sample of 800 students (final response rate: 72.7%).

Participant Characteristics: Participants' ages ranged from 18 to 27 years ($M = 20.8$, $SD = 1.6$). The sample consisted of 424 females (53%) and 376 males (47%), reflecting the approximate gender distribution in Egyptian public universities (where females represent approximately 52-55% of total students). The sample included 280 students from Humanities/Social Sciences (35%), 260 from Natural Sciences/Engineering (32.5%), and 260 from Health Sciences (32.5%).

4.3 Instruments:

A single electronic questionnaire was used, consisting of three main sections plus demographic questions (age, gender, specialization). The scales were arranged randomly to avoid order effects. A pilot study was conducted on 50 students (not included in the main sample) to check the clarity of wording and response time; minor modifications were made.

Translation and Cultural Adaptation Procedures:

All three scales were originally developed in English. A systematic translation and cultural adaptation process was followed, based on the guidelines of the International Test Commission (ITC, 2017):

1. **Forward Translation:** Two bilingual Egyptian psychologists (Ph.D. candidates in mental health) independently translated each scale from English into Arabic. One translator was familiar with the psychological constructs, while the other was a professional translator with no specialized knowledge of the constructs (to avoid translation bias).
2. **Synthesis:** The two translations were compared, and discrepancies were resolved through discussion to produce a single synthesized Arabic version.
3. **Back Translation:** A professional translator, who was blind to the original English versions and had no prior exposure to the scales, translated the Arabic versions back into English. The back-translated versions were compared to the originals by the research team to identify any semantic discrepancies. The comparison showed high semantic equivalence (exceeding 95%), confirming translation accuracy.
4. **Expert Review:** Three Egyptian professors of mental health were asked to evaluate the final Arabic version for clarity of wording and cultural appropriateness for the Egyptian context. Minor modifications were made based on their feedback, particularly regarding terms that might be unfamiliar to students.
5. **Pilot Study:** The Arabic version was administered to a pilot sample of 50 students to verify the clarity of items and response time. Modifications were made to items that students found difficult to understand. Response time ranged between 15 and 25 minutes.

Psychometric Properties of the Scales:

The psychometric properties of the three scales were examined, including two types of validity (exploratory factor analysis, EFA; and confirmatory factor analysis, CFA) and two types of reliability (Cronbach's alpha and split-half coefficient). Table 1 summarizes the results.

Table 1: Psychometric Properties of the Three Scales (Pilot Study, n = 50)

Scale	EFA Loadings	Factor	CFA Fit Indices	Cronbach's α	Split-Half
Cognitive Flexibility (Yuksel, 2023)	0.53-0.86	(two factors)	CFI = 0.92, RMSEA = 0.07	0.88	0.85
Psychological Well-Being (Okaya, 2024)	0.49-0.82	(six factors)	CFI = 0.91, RMSEA = 0.08	0.91	0.89

Scale	EFA Factor Loadings	CFA Fit Indices	Cronbach's α	Split-Half
English Language Learning Anxiety (Kazemi, 2026)	0.51-0.84 (three factors)	CFI = 0.90, RMSEA = 0.07	0.87	0.84

Section 1: Cognitive Flexibility Scale:

The scale developed by Yuksel (2023) was used, consisting of 12 items divided into two dimensions: perception of alternatives (6 items) and control over cognition (6 items). Items were translated into Arabic using back-translation. A 5-point Likert scale (1 = never applies, 5 = always applies) was employed. EFA (principal components) revealed two factors explaining 54% of total variance. CFA showed good fit ($\chi^2/df = 2.8$, CFI = 0.92, RMSEA = 0.07). Cronbach's alpha was 0.88, and the split-half coefficient was 0.85.

Section 2: Psychological Well-Being Scale:

The short version of Ryff's scale as reported in Okaya (2024) was used, consisting of 18 items across six dimensions (self-acceptance, positive relations, autonomy, environmental mastery, purpose in life, personal growth). The Arabic translation previously validated in Egypt was adopted (cultural appropriateness had been verified through previous studies on Egyptian samples). EFA showed six factors explaining 62% of variance; CFA indicated good fit ($\chi^2/df = 3.1$, CFI = 0.91, RMSEA = 0.08). Cronbach's alpha was 0.91, and split-half reliability was 0.89.

Section 3: English Language Learning Anxiety Scale:

The scale developed by Kazemi (2026) was used, consisting of 33 items across three dimensions: communication anxiety (12 items), test anxiety (10 items), and fear of negative evaluation (11 items). The Arabic translation used in a previous study on Egyptian universities was employed (cultural appropriateness had been verified through previous studies). EFA indicated three factors explaining 58% of variance; CFA showed acceptable fit ($\chi^2/df = 2.9$, CFI = 0.90, RMSEA = 0.07). Cronbach's alpha was 0.87, and split-half reliability was 0.84.

4.4 Ethical Considerations:

The electronic questionnaire was created on Google Forms and distributed to Egyptian university students via an electronic link. The first page of the questionnaire explained that participation was entirely voluntary, that no student was forced to answer, that no personal names or identifying information were collected, and that all responses would be used for scientific research purposes only. Data confidentiality was emphasized, and students were informed that they could withdraw from the study at any time without any consequences. Informed consent was obtained from all participants before they began answering the questionnaire.

4.5 Statistical Analysis:

Data were analyzed using SPSS version 29. Statistical procedures included:

1. Calculation of means and standard deviations for the main variables (descriptive statistics).
2. Pearson correlation matrix to examine bivariate relationships between variables.
3. Simple linear regression to test H1 and H2, with coefficients of determination (R^2), adjusted R^2 , eta-squared (η^2), t-values, and F-statistics.
4. Hierarchical regression (PROCESS Model 1) to test the moderation effect (H3). In the hierarchical regression, Step 1 entered cognitive flexibility (CF), Step 2 added English language learning anxiety (ELA), and Step 3 added the product term ($CF \times ELA$) after mean-centering the variables.
5. Simple slopes were calculated at three levels of the moderator: low (one SD below mean), mean, and high (one SD above mean).

6. Assumptions of linear regression (normality of residuals using Kolmogorov-Smirnov test, homoscedasticity using Levene's test, and independence of errors using Durbin-Watson statistic) were checked and met.

5. Results:

5.1 Descriptive Statistics:

Table 2 presents the means and standard deviations for the three main variables in the main sample (N = 800). The mean cognitive flexibility score was 3.85 (SD = 0.59) out of 5, the mean English language learning anxiety score was 3.14 (SD = 0.68) out of 5, and the mean psychological well-being score was 3.69 (SD = 0.72) out of 5. These values indicate that cognitive flexibility and psychological well-being were relatively high among the sample (exceeding 3.5 out of 5), while language anxiety was at a moderate level (around 3 out of 5).

Table 2: Means, Standard Deviations, and Ranges of Main Variables (N = 800)

Variable	Mean	SD	Minimum	Maximum
Cognitive Flexibility	3.85	0.59	1.90	5.00
English Language Learning Anxiety	3.14	0.68	1.20	4.90
Psychological Well-Being	3.69	0.72	1.40	5.00

5.2 Correlation Analysis

Before testing the hypotheses, a Pearson correlation matrix was computed (Table 3). A strong positive and significant correlation was found between cognitive flexibility and psychological well-being ($r = 0.56$, $p < 0.001$), and a moderate negative and significant correlation was found between English language learning anxiety and psychological well-being ($r = -0.49$, $p < 0.001$). A weak negative correlation was observed between cognitive flexibility and language anxiety ($r = -0.18$, $p < 0.01$), suggesting that students with higher cognitive flexibility tend to have slightly lower levels of language anxiety.

Table 3: Pearson Correlation Matrix among Main Variables (N = 800)

Variable	1	2	3
1. Cognitive Flexibility	1		
2. English Language Learning Anxiety	-0.18**	1	
3. Psychological Well-Being	0.56***	-0.49***	1

Note: ** $p < 0.01$, *** $p < 0.001$

5.3 Testing Hypothesis 1 (H₁)

Hypothesis H₀₁ stated that there is no significant positive relationship between cognitive flexibility and psychological well-being. Simple linear regression was performed with cognitive flexibility as the independent variable and psychological well-being as the dependent variable. Table 4 shows that the regression coefficient was positive and significant ($B = 0.68$, $SE = 0.06$, $\beta = 0.56$, $t = 12.34$, $p < 0.001$). $R^2 = 0.31$, adjusted $R^2 = 0.31$, $\eta^2 = 0.31$, and $F = 152.3$. Thus, H₀₁ was rejected, and the alternative hypothesis (a positive significant relationship) was accepted. Cognitive flexibility explained 31% of the variance in psychological well-being. The value of $\eta^2 = 0.31$ indicates a **large effect size** according to Cohen's criteria (where 0.01 is small, 0.06 is medium, and 0.14 is large).

Table 4: Simple Linear Regression Results for Hypothesis 1 (CF → PWB)

Predictor	B	SE	β	t	p	R ²	Adj. R ²	η^2	F
Cognitive Flexibility	0.68	0.06	0.56	12.34	<0.001	0.31	0.31	0.31	152.3

5.4 Testing Hypothesis 2 (H₂)

Hypothesis H₀₂ stated that there is no significant negative relationship between English language learning anxiety and psychological well-being. Simple linear regression was performed with ELA as the independent variable and PWB as the dependent variable. Table 5 shows that the regression coefficient was negative and significant (B = -0.52, SE = 0.05, β = -0.49, t = -9.87, p < 0.001). R² = 0.24, adjusted R² = 0.24, η^2 = 0.24, and F = 97.4. Thus, H₀₂ was rejected. ELA explained 24% of the variance in PWB. The value of η^2 = 0.24 indicates a **large effect size** according to Cohen's criteria.

Table 5: Simple Linear Regression Results for Hypothesis 2 (ELA → PWB)

Predictor	B	SE	β	t	p	R ²	Adj. R ²	η^2	F
English Language Learning Anxiety	-0.52	0.05	-0.49	-9.87	<0.001	0.24	0.24	0.24	97.4

5.5 Testing Hypothesis 3 :

Hypothesis H₀₃ stated that English language learning anxiety does not moderate the relationship between cognitive flexibility and psychological well-being (i.e., the interaction coefficient equals zero). Hierarchical regression was conducted. Table 6 presents the stepwise results. In Step 1, CF alone accounted for 31% of the variance in psychological well-being (R² = 0.31). Adding ELA in Step 2 increased R² to 0.45 (ΔR^2 = 0.14, p < 0.001), which represents a large effect size according to Cohen's criteria. In Step 3, the interaction term (CF × ELA) was added, and it was significant (β = -0.23, t = -4.12, p < 0.001). The change in R² due to the interaction was 0.05 (ΔF = 16.97, p < 0.001). The final model explained 50% of the variance in PWB (R² = 0.50). Table 7 provides the final regression coefficients.

Table 6: Hierarchical Regression Results for Moderation Effect (N = 800)

Step	Variables Entered	R ²	ΔR^2	β (interaction)	t	p	η^2 (step)
1	CF	0.31	0.31	--	--	--	0.31
2	CF + ELA	0.45	0.14	--	--	--	0.14
3	CF + ELA + (CF × ELA)	0.50	0.05	-0.23	-4.12	<0.001	0.05

Table 7: Final Regression Coefficients for the Moderation Model

Predictor	B	SE	β	t	p	η^2	95% CI for B
Constant	3.69	0.03	--	110.4	<0.001	--	[3.63, 3.75]
Cognitive Flexibility (CF)	0.51	0.05	0.42	9.56	<0.001	0.42	[0.41, 0.61]
English Language Learning Anxiety (ELA)	-0.40	0.04	-0.38	-9.12	<0.001	0.38	[-0.48, -0.32]
Interaction (CF $\times$ ELA)	-0.26	0.06	-0.23	-4.12	<0.001	0.23	[-0.38, -0.14]

Interpretation of Effect Size: The value of $\eta^2 = 0.05$ for the interaction indicates a **medium effect size** according to Cohen's criteria. Although this number may appear small, it is meaningful in social science research, as it explains an additional 5% of the variance in psychological well-being after controlling for the main effects of cognitive flexibility and language anxiety. This means that the interaction effect has practical significance in addition to statistical significance, confirming that the relationship between cognitive flexibility and psychological well-being depends meaningfully on the level of language anxiety.

To interpret the direction of the moderation, simple slopes of CF on PWB were calculated at three levels of ELA: low (one SD below mean), mean, and high (one SD above mean). Table 8 shows that the simple slope was 0.64 ($t = 8.73$, $p < 0.001$) at low ELA, 0.51 ($t = 9.56$, $p < 0.001$) at mean ELA, and only 0.26 ($t = 3.42$, $p < 0.01$) at high ELA.

Table 8: Simple Slopes of Cognitive Flexibility at Different Levels of English Language Learning Anxiety

Level of ELA	Simple Slope (B)	t	p	95% CI
Low (-1 SD)	0.64	8.73	<0.001	[0.50, 0.78]
Mean	0.51	9.56	<0.001	[0.41, 0.61]
High (+1 SD)	0.26	3.42	<0.01	[0.11, 0.41]

These results indicate that the positive effect of cognitive flexibility on psychological well-being weakens substantially when language anxiety is high. While the simple slope at low language anxiety was 0.64, it decreased to 0.26 at high language anxiety, meaning that the positive effect of cognitive flexibility decreased by over 59% $[(0.64 - 0.26) / 0.64 \times 100 = 59.4\%]$. This confirms that language anxiety negatively moderates the relationship between cognitive flexibility and psychological well-being. Consequently, H_{03} was rejected, and the alternative hypothesis (a significant moderation effect) was accepted.

6. Discussion

This study aimed to examine the moderating effect of English language learning anxiety on the relationship between cognitive flexibility and psychological well-being among Egyptian university students in the post-COVID-19 era. The results are discussed in light of the theoretical framework and previous studies, with a focus on theoretical and practical implications, limitations, and recommendations.

6.1 Discussion of Hypothesis 1: The Relationship between Cognitive Flexibility and Psychological Well-Being

The result of Hypothesis 1, which confirmed a strong positive and statistically significant relationship between cognitive flexibility and psychological well-being ($r = 0.56$, $R^2 = 0.31$), is consistent with the previous literature. Okaya (2024) found that psychological flexibility was a strong predictor of mental health across all age groups, and Sarpdağı (2025) found that cognitive flexibility was the most important predictor of psychological well-being among nursing students. The results also align with Kiye (2024), who found that cognitive flexibility was positively associated with psychological well-being through the mediating role of cognitive emotion regulation, and Nakhostin-Khayyat (2024), who confirmed the mediating role of cognitive flexibility between self-regulation and resilience.

These findings can be explained within the framework of Conservation of Resources theory (Fan, 2026), where cognitive flexibility represents a valuable personal resource that enables individuals to protect and enhance their other psychological resources. Students with high cognitive flexibility are better able to reinterpret stressful situations positively, generate alternative solutions to problems, and adapt to environmental changes, thereby contributing to the preservation of their psychological well-being and protecting them from the negative effects of academic and personal stressors (Wang, 2025). Cognitive flexibility also enables students to regulate their emotions more effectively through positive reappraisal and planning strategies, which enhances their mental health (Kiye, 2024).

It is noteworthy that the large effect size ($\eta^2 = 0.31$) indicates that cognitive flexibility explains nearly one-third of the variance in psychological well-being, confirming the critical importance of this cognitive resource in the university context, especially in the post-pandemic period characterized by increased levels of psychological stress and uncertainty (Hemi, 2024). This result is also consistent with Godara's study (2023), which showed that cognitive flexibility played a crucial role in protecting mental health during the pandemic.

However, it should be noted that some studies have found weaker effects of cognitive flexibility on psychological well-being in certain contexts, such as Bertieaux's study (2024), which focused on teachers and found that other factors such as psychological capital might be more influential. This suggests that the strength of the relationship may vary depending on context and sample, highlighting the importance of studying moderating factors such as language anxiety that may weaken this relationship.

6.2 Discussion of Hypothesis 2: The Relationship between English Language Learning Anxiety and Psychological Well-Being

The results of Hypothesis 2 confirmed a significant negative relationship between English language learning anxiety and psychological well-being ($r = -0.49$, $R^2 = 0.24$). This finding is consistent with previous studies that have pointed to the negative effects of language anxiety on students' mental health. Hu (2024) found that foreign language anxiety is negatively associated with academic achievement and self-confidence, Chen (2022) found that students with high anxiety showed greater cognitive load and poorer performance, and Sugandi (2026) found that language anxiety is highly prevalent among school students in rural contexts. Naibaho's study (2022) also indicated that anxiety is a primary factor in students' failure to learn English.

This negative relationship can be attributed to the fact that language anxiety, as a chronic negative emotional state, consumes a significant portion of students' limited cognitive and psychological resources. According to cognitive load theory (Chen, 2022), when a student is in a state of high anxiety, a large portion of their attention and working memory is directed toward self-monitoring and negative thoughts about language performance, thereby reducing resources available for dealing with other life stressors and leading to lower psychological well-being (Hsu, 2024). Additionally, language anxiety leads to avoidance of language situations, depriving students of practice opportunities and creating a vicious cycle of increasing anxiety and decreasing self-efficacy (Dadaboev & Anis, 2025).

However, it should be noted that the effect size ($\eta^2 = 0.24$) indicates that language anxiety explains 24% of the variance in psychological well-being, which is slightly less than the effect of cognitive flexibility (31%). This

suggests that language anxiety, despite its importance, is not the only factor affecting psychological well-being, and other factors may play a role in this relationship, such as social support, coping strategies, and self-efficacy (Khan, 2024; Das, 2025; Zhang & Zhang, 2025). An alternative interpretation of this relationship is that students with poor psychological well-being may be more susceptible to language anxiety, suggesting a possible bidirectional relationship between the variables.

6.3 Discussion of Hypothesis 3: The Moderating Effect of English Language Learning Anxiety:

The most notable finding of this study is the confirmation of Hypothesis 3, as hierarchical regression analysis showed that English language learning anxiety negatively moderates the relationship between cognitive flexibility and psychological well-being ($\beta = -0.23$, $\Delta R^2 = 0.05$, $\eta^2 = 0.05$). Simple slopes analysis revealed that the positive effect of cognitive flexibility on psychological well-being was much weaker when language anxiety was high (slope = 0.26) compared to when it was low (slope = 0.64), representing a reduction of over 59% in the positive effect.

This moderating effect can be explained in light of two main theories:

First: Conservation of Resources Theory (Fan, 2026): This theory posits that individuals seek to obtain, protect, and maintain resources, and that resource loss leads to increased psychological stress and diminished well-being. In the context of the present study, English language learning anxiety represents a depletion of students' cognitive and psychological resources. When language anxiety is high, a significant portion of cognitive resources (such as attention and working memory) is consumed by self-monitoring and negative thoughts (Chen, 2022), thereby reducing the remaining resources available for effectively deploying cognitive flexibility in facing general life stressors. Consequently, even if a student possesses a high level of cognitive flexibility, this flexibility becomes less effective when most of their cognitive resources are depleted due to language anxiety. This explains why the positive effect of cognitive flexibility on psychological well-being was much weaker at high levels of language anxiety.

Second: Job Demands-Resources Model (Reintjes, 2025; Shao, 2025): This model assumes that high demands weaken the effect of available resources. When demands are high, the individual's physical and psychological energy is depleted, reducing their ability to benefit from available resources. In the context of the present study, English language learning anxiety represents a high psychological demand that depletes students' psychological energy, while cognitive flexibility represents a personal resource. When language anxiety is high, the student becomes unable to fully benefit from their cognitive flexibility because most of their psychological energy is consumed in dealing with language anxiety. This is consistent with Shao's findings (2025) that high job demands weaken the effect of personal resources on well-being.

This result differs from some previous studies that found that cognitive flexibility retains its protective effect even in the presence of high psychological stress (Godara, 2023). This difference can be explained by the fact that language anxiety represents a specific type of stress related to the academic linguistic domain, which may be more cognitively depleting than general types of stress, especially in the Egyptian context where English is a primary medium of instruction and a graduation requirement (Yuksel, 2023).

The practical significance of this finding is that enhancing cognitive flexibility alone may not be sufficient to improve students' psychological well-being if they are experiencing high levels of language anxiety. Psychological interventions in the university setting should target both enhancing cognitive flexibility and reducing language anxiety simultaneously to achieve maximum benefit for students (Kazemi, 2026). This finding also emphasizes the importance of considering contextual and cultural factors when designing psychological support programs for students, as sources of psychological stress and their effects vary across different academic and cultural contexts.

6.4 Theoretical and Practical Implications:

Theoretical Implications:

This study makes an important theoretical contribution by extending the application of Conservation of Resources theory and the Job Demands-Resources model to the academic linguistic context. The study demonstrated that

English language learning anxiety can be understood as a demand that depletes cognitive resources, thereby weakening the effect of the personal resource (cognitive flexibility) on psychological well-being. This adds a new dimension to understanding the relationships between psychological variables in academic contexts and highlights the need to integrate contextual and cultural factors into theoretical models of mental health.

The study also contributes to filling the gap in the research literature concerning moderating factors in the relationship between cognitive flexibility and psychological well-being. While most previous studies focused on the direct relationship between these variables or their mediating role (Kiye, 2024; Tamannaefar, 2026; Yousefi Afrashteh, 2022), this study provides evidence of a moderating factor (language anxiety) that can alter the strength of this relationship.

Practical Implications:

The study recommends several practical actions:

1. **Integrating Language Anxiety Reduction Programs into University Curricula:** English language curricula should explicitly include strategies to reduce language anxiety, such as relaxation techniques, cognitive restructuring of negative thoughts, and gradual exposure to language situations (Kazemi, 2026).
2. **Designing Integrated Training Programs:** Training programs should be designed that combine enhancing cognitive flexibility (through problem-solving exercises, positive reappraisal, and diversifying cognitive strategies) with reducing language anxiety (through anxiety management techniques, communication skills training, and providing a supportive learning environment).
3. **Training Psychological Counselors:** University psychological counselors should be trained to recognize symptoms of English language learning anxiety as a potential source of psychological distress and equipped with the necessary tools to assess and treat this type of anxiety.
4. **Raising Faculty Awareness:** Faculty members should be educated about the nature of language anxiety and its negative effects on students' mental health, and encouraged to adopt teaching practices that reduce language anxiety (such as providing constructive feedback, gradual assessment of student performance, and avoiding comparisons between students) (Hikmah & Kholis, 2025).
5. **Establishing Language Support Centers:** Language support centers can be established in universities that provide consulting services for students suffering from language anxiety and offer intensive training programs to improve English language skills in a safe and supportive environment.

7. Limitations and Future Research:

Despite the scientific value of the findings of this study, it faces several limitations that should be considered when interpreting the results, and which open avenues for future research.

First: Cross-Sectional Design: The study relied on a cross-sectional design, meaning that data were collected at a single point in time, which does not allow for establishing causal relationships between variables. Although the results indicate correlational relationships and a moderation effect, it cannot be conclusively stated that cognitive flexibility causes psychological well-being, or that language anxiety causally moderates this relationship. An alternative interpretation might be that students with low psychological well-being are more susceptible to language anxiety, or that other unmeasured variables affect these relationships. Therefore, the study recommends conducting longitudinal studies that track participants over multiple time points to test the causal direction of relationships between variables, as well as experimental studies involving therapeutic interventions to test the effectiveness of language anxiety reduction and cognitive flexibility enhancement programs in improving psychological well-being.

Second: Reliance on Self-Report: The study relied on self-report measures to collect data, meaning that the results reflect students' subjective perceptions rather than objective measurements of the variables. This may lead to biases such as social desirability bias or recall bias. Future studies are recommended to include additional

objective measures, such as behavioral assessments of cognitive flexibility (through cognitive performance tasks), clinical interviews to assess psychological well-being, and classroom observation to assess language anxiety.

Third: Specificity to the Egyptian Context: The study sample was limited to Egyptian students in public universities only, which limits the generalizability of the results to other cultural and geographical contexts. Relationships between variables may differ across cultural backgrounds, educational systems, and levels of English language exposure. The study recommends conducting comparative research including samples from other Arab countries, private universities, and different educational levels (high school students, graduate students) to test the stability of findings across different contexts.

Fourth: Lack of Examination of Mediating Variables: This study did not examine mediating variables that might explain the mechanisms through which language anxiety moderates the relationship between cognitive flexibility and psychological well-being. It is possible that there are mediating variables such as emotion regulation strategies, academic self-efficacy, social support, or academic achievement that may play an important role in explaining the underlying mechanisms of the moderation effect. The study recommends future research adopting moderated mediation models to test whether the effect of the interaction between cognitive flexibility and language anxiety on psychological well-being operates through these mediating variables.

Fifth: Reliance on Only Three Universities: Although the selection of three universities from different geographical regions represents some diversity, this number may not reflect the full diversity of Egyptian universities, especially regarding private and national universities that may differ in their educational environment and language requirements. Furthermore, the distribution of the sample across disciplines was approximately equal, whereas the actual distribution of students across disciplines might be different in reality. The study recommends conducting comprehensive research including a larger number of universities from various Egyptian governorates, taking into account the natural distribution of students across academic disciplines.

8. Conclusion:

This study concluded that English language learning anxiety negatively moderates the relationship between cognitive flexibility and psychological well-being among Egyptian university students in the post-COVID-19 era. The results showed that the positive effect of cognitive flexibility on psychological well-being is stronger when language anxiety is low, and weakens substantially when language anxiety is high (with a reduction exceeding 59% in effect size). This finding represents an important addition to the research literature that has largely focused on direct relationships between cognitive flexibility and psychological well-being, as it highlights the role of contextual factors (such as language anxiety) in altering the strength of these relationships.

The practical significance of these findings lies in their indication that enhancing cognitive flexibility alone may not be sufficient to improve students' mental health in academic contexts requiring proficiency in a foreign language, unless language anxiety is simultaneously addressed as a factor that hinders the effectiveness of cognitive flexibility. The study recommends integrating language anxiety reduction strategies into training programs designed to enhance cognitive flexibility, training psychological counselors and faculty members to recognize language anxiety as a source of psychological distress, and designing integrated interventions targeting both the enhancement of psychological resources and the reduction of psychological demands in the university environment.

The study also emphasizes the need for further research using longitudinal and experimental designs to test causality, expanding samples to include different cultural and educational contexts, and exploring mediating variables that may explain the underlying mechanisms of the moderation effect. The researcher hopes that this study will contribute to directing attention toward a deeper understanding of the complex interactions between cognitive and emotional variables in academic contexts, and inspire the development of more effective psychological support programs for university students.

References:

- Akyıl, Y., Erdiñ, B., K    , E., &   elik  eken, T. S. (2025). From pessimism to subjective well-being in adolescents: A longitudinal mediation study of cognitive flexibility. *Psychology in the Schools*, 62(11), 4440-4449. <https://doi.org/10.1002/pits.70010>
- Alsaif, B., Hassan, S. U. N., Alzain, M. A., Almishaal, A. A., & Zahra, A. (2024). Cognitive flexibility's role in reducing academic stress during the COVID-19 pandemic. *Psychology Research and Behavior Management*, 17, 457-466. <https://doi.org/10.2147/PRBM.S451211>
- Bertieaux, D., Hesbois, M., Goyette, N., & Duroisin, N. (2024). Psychological capital and well-being: An opportunity for teachers' well-being? Scoping review of the scientific literature in psychology and educational sciences. *Acta Psychologica*, 248, 104370. <https://doi.org/10.1016/j.actpsy.2024.104370>
- Birni, G., Erus, S. M., Satici, S. A., & Deniz, M. E. (2025). Psychological flexibility and self-critical rumination: A serial mediation between adverse childhood experiences and mental well-being in adulthood. *Personality and Individual Differences*, 232, 112861. <https://doi.org/10.1016/j.paid.2024.112861>
- Bonacquisti, A., Woodworth, E. C., Diaz, M., & Grunberg, V. A. (2024). Acceptance-based process variables on postpartum well-being and distress: The mediating role of psychological flexibility. *PLoS ONE*, 19(12), e0312454. <https://doi.org/10.1371/journal.pone.0312454>
- Chen, C. H., Koong, C. S., & Liao, C. (2022). Influences of integrating dynamic assessment into a speech recognition learning design to support students' English speaking skills, learning anxiety and cognitive load. *Educational Technology & Society*, 25(1), 1-14.
- C  rcir, O., & Tagay,   . (2024). The relationships between cognitive flexibility, perfectionism, optimism, self-compassion and psychological well-being: A mixed study. *Current Psychology*, 43(22), 19830-19846. <https://doi.org/10.1007/s12144-024-05775-2>
- Dadaboev, D., & Anis, H. (2025). Affective variables of second language acquisition: Language learning anxiety. *The Lingua Spectrum*, 5(1), 420-427.
- Das, S. S., Alat, P., & Sebastian, F. (2025). Psychological resources and mental health: Understanding academic engagement and performance of students in HEIs during COVID-19. *Acta Psychologica*, 259, 105416. <https://doi.org/10.1016/j.actpsy.2025.105416>
- Deitcher, D. B., & Alon, R. (2025). Special education preschool teachers' stress and well-being during wartime: Relations with psychological capital, occupational self-efficacy, and social support. *Psychology in the Schools*, 62(10), 3926-3938. <https://doi.org/10.1002/pits.23584>
- Fan, X., & Yang, N. (2026). When digital meets human: How organizational digital capability promotes service innovation via cognitive flexibility and empowering leadership. *Acta Psychologica*, 262, 106014. <https://doi.org/10.1016/j.actpsy.2025.106014>
- Gilar-Corbi, R., Perez-Soto, N., Izquierdo, A., Castej  n, J. L., & Pozo-Rico, T. (2024). Emotional factors and self-efficacy in the psychological well-being of trainee teachers. *Frontiers in Psychology*, 15, 1434250. <https://doi.org/10.3389/fpsyg.2024.1434250>
- Godara, M., Everaert, J., Sanchez-Lopez, A., Joormann, J., & De Raedt, R. (2023). Interplay between uncertainty intolerance, emotion regulation, cognitive flexibility, and psychopathology during the COVID-19 pandemic: A multi-wave study. *Scientific Reports*, 13(1), 9854. <https://doi.org/10.1038/s41598-023-36211-3>
- Hemi, A., Sopp, M. R., Bonanno, G., Michael, T., McGiffin, J., & Levy-Gigi, E. (2024). Flexibility predicts chronic anxiety and depression during the first year of the COVID-19 pandemic—A longitudinal investigation of mental health trajectories. *Psychological Trauma: Theory, Research, Practice, and Policy*, 16(6), 961. <https://doi.org/10.1037/tra0001517>
- Hikmah, P. C., & Kholis, A. (2025). Managing students' anxiety in English language learning: An analysis of teachers' strategies. *Edunesia: Jurnal Ilmiah Pendidikan*, 6(2), 784-795. <https://doi.org/10.51276/edu.v6i2.1190>

- Hsu, T. C., Chang, C., & Jen, T. H. (2024). Artificial intelligence image recognition using self-regulation learning strategies: Effects on vocabulary acquisition, learning anxiety, and learning behaviours of English language learners. *Interactive Learning Environments*, 32(6), 3060-3078. <https://doi.org/10.1080/10494820.2023.2165508>
- Hu, X., Zhang, X., & McGeown, S. (2024). Foreign language anxiety and achievement: A study of primary school students learning English in China. *Language Teaching Research*, 28(4), 1594-1615. <https://doi.org/10.1177/13621688211032332>
- International Test Commission. (2017). *The ITC Guidelines for Translating and Adapting Tests* (2nd ed.). International Test Commission.
- Kazemi, F. (2026). The effect of artificial intelligence on English learners' anxiety levels. In *AI-powered English teaching* (pp. 309-328). IGI Global Scientific Publishing. <https://doi.org/10.4018/979-8-3373-1952-0.ch010>
- Khan, A., Zeb, I., Zhang, Y., Fazal, S., & Ding, J. (2024). Relationship between psychological capital and mental health at higher education: Role of perceived social support as a mediator. *Heliyon*, 10(8), e29472. <https://doi.org/10.1016/j.heliyon.2024.e29472>
- Kiye, S., & Habeş, E. Ç. (2024). The mediating role of cognitive emotion regulation in the relationship between cognitive flexibility and psychological well-being. *İnönü Üniversitesi Eğitim Fakültesi Dergisi*, 25(3), 1292-1310. <https://doi.org/10.17679/inuefd.1481952>
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607-610.
- Naibaho, L. (2022). Factors affecting students failures due to anxiety in learning English. *English Review: Journal of English Education*, 10(3), 911-918.
- Nakhostin-Khayyat, M., Borjali, M., Zeinali, M., Fardi, D., & Montazeri, A. (2024). The relationship between self-regulation, cognitive flexibility, and resilience among students: A structural equation modeling. *BMC Psychology*, 12(1), 337. <https://doi.org/10.1186/s40359-024-01843-1>
- Okaya, S., Minihan, S., Andrews, J. L., Daniels, S., Grunewald, K., Richards, M., & Schweizer, S. (2024). Intolerance of uncertainty and psychological flexibility as predictors of mental health from adolescence to old age. *Social Psychiatry and Psychiatric Epidemiology*, 59(12), 2361-2368. <https://doi.org/10.1007/s00127-024-02724-z>
- Reintjes, C., Kaiser, T., Winter, I., & Bellenberg, G. (2025). Resilient teachers in a strained system: Mental health and resilience amidst school transformation processes. *Education Sciences*, 15(9), 1251. <https://doi.org/10.3390/educsci15091251>
- Sarpdağı, Y., Kaplan, E., Sir, Ö., Yıldız, M., Kaymaz, D., Çiftci, N., & Sarpdağı, S. (2025). The effect of secondary traumatic stress and cognitive flexibility on psychological well-being in health education students. *BMC Medical Education*, 25(1), 929. <https://doi.org/10.1186/s12909-025-07489-w>
- Shao, Y., Jiang, W., Zhu, H., Zhang, C., & Xu, W. (2025). The relationship between work stress and well-being among Chinese primary and secondary school teachers: The chain mediation of affective rumination and work engagement. *BMC Psychology*, 13(1), 337. <https://doi.org/10.1186/s40359-025-02628-w>
- Sugandi, F., Nurhayati, L., & Yulia, Y. (2026). Foreign language anxiety in English speaking activities: A mixed-methods study of rural Indonesian school students. *Journal of Innovation and Research in Primary Education*, 5(1), 1318-1331.
- Tamannaefar, M. R., Shirani, Z., Esmikhani, M., & Zaremohzzabieh, Z. (2026). The mediating role of resilience in the relationship between cognitive flexibility and psychological well-being in patients with irritable bowel syndrome: A cross-sectional study. *BMC Gastroenterology*. <https://doi.org/10.1186/s12876-026-04654-3>

- Wang, X., Shao, S., Cheng, H., Blain, S. D., Tan, Y., & Jia, L. (2025). Effects of cognitive flexibility on dynamics of emotion regulation and negative affect in daily life. *Anxiety, Stress, & Coping*, 38(3), 365-378. <https://doi.org/10.1080/10615806.2024.2423154>
- Yousefi Afrashteh, M., & Hasani, F. (2022). Mindfulness and psychological well-being in adolescents: The mediating role of self-compassion, emotional dysregulation and cognitive flexibility. *Borderline Personality Disorder and Emotion Dysregulation*, 9(1), 22. <https://doi.org/10.1186/s40479-022-00192-y>
- Yuksel, D., Soruç, A., Horzum, B., & McKinley, J. (2023). Examining the role of English language proficiency, language learning anxiety, and self-regulation skills in EMI students' academic success. *Studies in Second Language Learning and Teaching*, 13(2), 399-426. <https://doi.org/10.14746/ssllt.38280>
- Zhang, P., & Zhang, H. (2025). From resources to efficacy over time: A longitudinal study of psychological capital, emotion regulation, and teacher self-efficacy. *Frontiers in Psychology*, 16, 1764648. <https://doi.org/10.3389/fpsyg.2025.1764648>
- Zheng, C., Zhang, T., Chen, X., Zhang, H., Wan, J., & Wu, B. (2026). Assessing learners' English public speaking anxiety with multimodal deep learning technologies. *Computer Assisted Language Learning*, 39(1-2), 27-55. <https://doi.org/10.1080/09588221.2024.2351129>

قلق تعلم اللغة الإنجليزية بوصفه متغيراً مُعدّلاً للعلاقة بين المرونة المعرفية والرفاه النفسي لدى طلبة الجامعات في مرحلة ما بعد جائحة كوفيد-١٩

منتصر عادل سيد أحمد^{*}

^١ جامعة الوادي الجديد، جمهورية مصر العربية

الملخص:

هدفت هذه الدراسة إلى فحص ما إذا كان قلق تعلم اللغة الإنجليزية يؤدي دور المتغير المُعدّل في العلاقة بين المرونة المعرفية والرفاه النفسي لدى طلبة الجامعات المصريين في مرحلة ما بعد جائحة كوفيد-١٩، وذلك استناداً إلى نظرية الحفاظ على الموارد ونموذج متطلبات العمل-الموارد. واعتمدت الدراسة المنهج الوصفي الارتباطي، حيث طُبِّقَت على عينة عشوائية طبقية مكونة من (٨٠٠) طالب جامعي في مرحلة البكالوريوس (متوسط العمر = ٢٠,٨ سنة، والانحراف المعياري = ١,٦). وأكمل المشاركون مقاييس إلكترونية مُتحققاً من صدقها وثباتها لقياس المرونة المعرفية، والرفاه النفسي، وقلق تعلم اللغة الإنجليزية، وقد أظهرت جميعها مستويات مرتفعة من الثبات (معامل كرونباخ ألفا = ٠,٨٨، و ٠,٩١، و ٠,٨٧ على التوالي). وأظهرت نتائج معاملات ارتباط بيرسون وجود علاقة ارتباطية موجبة بين المرونة المعرفية والرفاه النفسي ($r = 0.56$)، $p < 0.001$ ، في حين وُجِدَت علاقة ارتباطية سالبة بين قلق تعلم اللغة الإنجليزية والرفاه النفسي ($r = -0.49$)، $p < 0.001$. كما بين تحليل الانحدار الهرمي وجود أثر تفاعلي دال إحصائياً ($\beta = -0.23$)، $t = -4.12$ ، $p < 0.001$ ، مما يشير إلى أن قلق تعلم اللغة الإنجليزية يُعَدّل العلاقة بين المرونة المعرفية والرفاه النفسي. وأكد تحليل الانحدارات البسيطة أن الأثر الإيجابي للمرونة المعرفية على الرفاه النفسي كان أضعف بصورة ملحوظة عند المستويات المرتفعة من قلق تعلم اللغة الإنجليزية (الميل = ٠,٢٦، $p < 0.01$) مقارنةً بالمستويات المنخفضة من القلق (الميل = ٠,٦٤، $p < 0.001$) وهو ما يمثل انخفاضاً يزيد على ٥٩٪ في حجم الأثر. وتشير هذه النتائج إلى أن المرونة المعرفية وحدها قد لا تكون كافية لحماية الصحة النفسية للطلبة عندما يكون قلق تعلم اللغة الإنجليزية مرتفعاً، إذ يبدو أن هذا القلق يستنزف الموارد النفسية التي يمكن للمرونة المعرفية أن تعبئها في الظروف الطبيعية. ومن الناحية التطبيقية، تؤكد النتائج أهمية تصميم تدخلات متكاملة تستهدف في الوقت نفسه تعزيز القدرة على التكيف المعرفي وخفض القلق المرتبط بتعلم اللغة، بدلاً من التركيز على أي منهما بصورة منفصلة. كما توصي الدراسة بضرورة تعاون برامج الصحة النفسية في الجامعات مع معلمي اللغة الإنجليزية لتوفير بيئات تعليمية داعمة تُخفف من المخاوف المرتبطة بالتقويم والأداء، بما يمكن الطلبة من الاستفادة الكاملة من قدراتهم المعرفية. وبوجه عام، تسهم هذه الدراسة في تعميق فهم الكيفية التي يمكن من خلالها للعوامل الوجدانية والسياقية أن تحدّ أو تعزز الدور الوقائي للموارد المعرفية في البيئات الأكاديمية، كما تقدم رؤى عملية يمكن الاستفادة منها في تطوير استراتيجيات دعم الطلبة في مرحلة ما بعد الجائحة.

الكلمات المفتاحية: المرونة المعرفية، الرفاه النفسي، قلق تعلم اللغة الإنجليزية، طلبة الجامعات، المتغير المُعدّل.