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Original Paper

An Analysis of English Majors' Writing Anxiety

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Abstract

Writing anxiety constitutes a significant affective barrier affecting second language acquisition and academic writing performance among English majors. As AI-assisted writing tools increasingly integrate into learning environments, exploring their multidimensional characteristics and behavioral associations holds considerable importance. This study employs a quantitative research methodology, utilizing the Second Language Writing Anxiety Inventory (SLWAI) to survey 75 English majors. It aims to address the following questions: What are the overall levels of students' writing anxiety and the differences across its dimensions? Are demographic factors correlated with anxiety levels? Do high-anxiety students exhibit stronger writing avoidance behaviors, potentially indicating latent dependence on AI tools? What relationships exist between physiological/cognitive anxiety and evaluative anxiety? Results indicate that students' overall writing anxiety is moderately high, with cognitive and behavioral dimensions being most prominent. Among demographic factors, only grade level significantly influences cognitive anxiety. Highly anxious students exhibited significant writing avoidance tendencies, indirectly suggesting potential reliance on AI tools to alleviate anxiety; evaluation anxiety showed significant positive correlations with both cognitive and physiological anxiety. This study provides empirical evidence for understanding the structure and behavioral manifestations of writing anxiety in the digital age, offering insights for instructional interventions and technology integration.

Keywords

Writing anxiety, English majors, SLWAI, Writing avoidance behavior, AI tool dependency

1. Introduction

The study was undertaken to investigate the multifaceted phenomenon of writing anxiety among English majors, a prevalent affective barrier that significantly influences second language acquisition and academic writing performance (Nessir & Tadesse, 2019). In an era where digital tools, particularly

AI-assisted writing technologies, are becoming increasingly integrated into learning environments (Zhang & Yang, 2022), understanding the nature, sources, and behavioral correlates of this anxiety gains renewed importance. This research employs a quantitative approach, utilizing the Second Language Writing Anxiety Inventory (SLWAI) to systematically examine the overall level, dimensional differences, demographic associations, and specific behavioral manifestations—such as writing avoidance—of writing anxiety (Cai, Liu, & Lu, 2015). Furthermore, it explores the indirect implications these behaviors may have on students' potential reliance on AI tools as a coping mechanism.

The need for this study arises from the persistent challenges writing anxiety poses to language learners (Peng, 2024), coupled with the lack of empirical attention to how contemporary digital resources might intersect with traditional anxiety dynamics. By addressing these gaps, the study aims to provide a nuanced, data-driven perspective that can inform both pedagogical practices and future research in the field of L2 writing.

The thesis is structured as follows: following this introduction, a comprehensive review of existing literature—both domestic and international—on writing anxiety is presented. The methodology section details the research design, participants, instruments, and analytical procedures. Subsequently, the results are reported and discussed in relation to the proposed research questions and existing theories. The final chapter concludes with a summary of key findings, implications for theory and practice, acknowledgment of limitations, and suggestions for future research directions.

2. Literature Review

Writing anxiety is a common affective factor in foreign language learning, exerting a significant impact on the academic and comprehensive writing performance of English majors in particular. Based on defining core concepts, this chapter systematically combs through relevant domestic and international studies from both theoretical and empirical perspectives, evaluates their research methods and tools, and attempts to construct a theoretical framework applicable to this study, so as to systematically present the research context and progress in this field.

2.1 Research Status at Home

Domestic research on writing anxiety among English majors has yielded abundant achievements. In terms of concept definition, writing anxiety is often understood as a state of tension, worry, or avoidance that arises during the writing process (Zhou et al., 2025). In her early survey, Ma (2012) also described it as a negative emotional state affecting the efficiency of writing task execution.

From the perspectives of research angles and empirical findings, scholars have explored this phenomenon from various aspects. Based on flow theory, Zhu et Shi (2025) examined the negative correlation between flow experience and anxiety in academic English writing. Peng (2024) focused on business English majors, investigating the structural relationships among second language writing anxiety, critical thinking disposition, and business English writing competence. The connection

between writing anxiety and other individual factors has also attracted attention: for example, Wang (2023) explored its correlation with self-regulatory strategies, while Liu (2023) analyzed the combined impact of anxiety, enjoyment, and writing motivation on writing performance. Taking a different approach, Cheng (2023) focused on the language production dimension, studying the relationship between lexical richness and writing anxiety.

Teaching intervention is an important approach to alleviating writing anxiety, leading to a number of empirical studies. Wang (2024) empirically tested the effectiveness of the PAD Class teaching model in reducing writing anxiety among English majors. Zhang and Qin (2020) explored the dual impact of the "reading-to-write" task format on writing anxiety and writing ability. Zhong and Fan (2018) adopted a quantitative tracking method to examine the long-term effect of the CLIL (Content and Language Integrated Learning) model on writing anxiety. With the integration of technology into teaching, Pan (2023) studied the effect of the "listening-to-promote-writing" teaching method on students' anxiety and academic performance, while Zhang and Yang (2022) explored the impact of applying the "length-based approach" in the Pigaiwang (an online writing evaluation platform) environment on students' writing anxiety and performance.

From macro-level status surveys to micro-level correlation studies, Deng (2024) conducted a regional empirical study taking a university in Hainan as an example. Zhou (2012) was one of the earliest scholars to explore the correlation between writing anxiety and the use of writing strategies among Chinese English majors. Cai et al. (2015) conducted a systematic analysis of the causes of writing anxiety.

In terms of research methods and tools, questionnaire surveys are widely adopted in relevant studies. Zhang (2023)'s research simultaneously focused on multiple variables such as English writing anxiety, writing strategies, and writing self-efficacy. Despite the diversity of research designs, early studies such as those by Zhou (2012) and Ma (2012) mainly relied on cross-sectional surveys and correlation analysis of data, which have limitations in revealing dynamic processes.

2.2 Research Status Abroad

Relevant foreign studies provide cross-cultural perspectives, helping to understand the universality and contextual specificity of writing anxiety. Conceptually, writing anxiety is often intertwined with the concept of "Writing Apprehension" (Asmari, 2013).

Many studies have focused on the anxiety experiences and their impacts among specific student groups. Olanezhad (2015) conducted a comparative study on writing anxiety among Iranian college students majoring in English translation, teaching, and literature, revealing differences brought about by professional backgrounds. Nessir and Tadesse (2019) targeted first-year English majors at Wolaita Sodo University, specifically analyzing the relationship between writing anxiety and writing performance. Asmari (2013)'s survey of English majors in Saudi Arabia comprehensively examined the correlation among writing strategies, writing anxiety, and writing achievement.

In addition to quantitative research, qualitative methods have also been used to deeply understand the

nature of anxiety. Lin et al. (2017) conducted a qualitative study on the perspectives of English majors in Taiwan Region of China, exploring some controversial issues related to English writing apprehension and providing in-depth insights.

3. Methodology

This study employs a quantitative research design to systematically investigate the multi-dimensional characteristics, sources, impacts, and potential correlates of writing anxiety among English majors. The analysis is grounded in the statistical results of the SLWAI (Second Language Writing Anxiety Inventory), a standardized instrument designed to measure anxiety levels in academic writing contexts. By focusing exclusively on quantitative data, the study aims to identify patterns, differences, and relationships within the dataset, providing a robust empirical foundation for understanding writing anxiety.

The SLWAI consists of 27 items categorized into four dimensions: cognitive anxiety (e.g., mental confusion, blank mind), physiological reactions (e.g., intense heartbeat, trembling), behavioral avoidance (e.g., procrastination, avoidance of writing tasks), and evaluative anxiety (e.g., fear of negative feedback, concerns about peer judgment). The inventory uses a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree), with higher scores indicating greater anxiety. The dataset includes responses from English majors, covering demographic information (gender, grade level, English proficiency, years of study) and AI tool usage patterns.

3.1 Research Questions

(1) What is the overall level of writing anxiety among English majors? Are there significant differences in anxiety intensity across the dimensions (cognitive, physiological, behavioral, evaluative)?

(2) Which demographic factors (gender, grade level, English proficiency, years of English study) are significantly associated with writing anxiety levels?

(3) Do students with high writing anxiety exhibit significantly greater writing avoidance behaviors (as measured by items X8,X12,X13,X14) compared to low-anxiety students, and how might these behavioral patterns indirectly suggest a latent reliance on AI tools for anxiety mitigation?

(4) How do students' physiological and cognitive anxiety responses (e.g., trembling, mental confusion) correlate with their evaluative concerns (e.g., fear of criticism)?

3.2 Participants

The participants in this study were selected from a diverse student population engaged in English language learning. A total of 75 students, ranging from freshmen to seniors, with varying levels of English proficiency, participated in the research. The sample included both male (n=9) and female (n=66) students, ensuring gender diversity. Participants were all English majors from Hunan University Of Technology and Business. The inclusion criteria required participants to have several years of English learning experience, ensuring a basic level of familiarity with the language.

3.3 Instruments

The primary instrument used in this study was the "SLWAI (Writing Anxiety Scale)", which was meticulously designed to include 23 specific items (X1 to X22, plus the daily usage of AI-assisted writing tools, X0). These items comprehensively assessed students' anxiety feelings and behavioral reactions during the English writing process. The scale items covered a range of aspects, including mental confusion under time constraints (X1), panic sensations (X2), physical reactions (such as trembling or sweating, X3), accelerated heartbeat (X4), overall stiffness and tension (X5), freezing when suddenly asked to write (X6), blank mind at the start of writing (X7), making excuses to avoid writing (X8), proactive writing behaviors (such as seizing opportunities to write in English, X9 to X11), writing avoidance behaviors (X12 to X14), concerns about evaluations (X15 to X17), fears of being ridiculed or having work discussed in class (X18 to X19), tension during writing (X20), and worries and anxieties about grading (X21 to X22). Each item was rated on a Likert five-point scale, ranging from "completely disagree" to "completely agree," to quantify students' levels of writing anxiety.

3.4 Data Collection

The data collection process adhered to strict standards and procedures. First, we explained the research purpose and scale completion method in detail to the participants, ensuring they fully understood and agreed to participate. Subsequently, participants independently completed the "SLWAI (Writing Anxiety Scale)". During the data collection process, we ensured a quiet and private environment to minimize external distractions and enhance data validity. Ultimately, I successfully collected 75 valid questionnaires, laying a solid foundation for subsequent data analysis.

3.5 Data Analysis

During the data analysis phase, we used SPSS software to systematically process the collected data.

3.5.1 Overall Level of Writing Anxiety and Differences Across Dimensions

Research Question 1: What is the overall level of writing anxiety among English majors? Are there significant differences in anxiety intensity across the dimensions (cognitive, physiological, behavioral, evaluative)?

Descriptive statistics (Table 1) indicate that the overall writing anxiety score among the 75 English majors had a mean of 73.97 (SD = 11.77), with scores ranging from 35 to 98. This suggests a moderate to high level of overall writing anxiety in the sample.

Table 1. Total Score

N	**Valid**	**75**
	Missing	**0**
Mean		**73.97**
Std. Deviation		**11.766**
Minimum		**35**

Maximum	**98**

Analysis of the four sub-dimensions (Table 2) revealed the following mean scores:

Cognitive Dimension:3.44 (SD = 0.88)

Physiological Dimension:3.05 (SD = 0.97)

Behavioral Dimension:3.47 (SD = 0.62)

Evaluative Dimension:3.38 (SD = 0.60)

Table 2.

	N	Range	Min	Max	Mean	Std. Deviation
Cognitive Dimension	**75**	**4.00**	**1.00**	**5.00**	**3.4400**	**0.87750**
Physiological Dimension	**75**	**4.00**	**1.00**	**5.00**	**3.0500**	**0.97173**
Behavioral Dimension	**75**	**3.43**	**1.57**	**5.00**	**3.4667**	**0.61974**
Evaluative Dimension	**75**	**2.75**	**1.88**	**4.63**	**3.3767**	**0.60316**
Valid N (listwise)	**75**					

A one-way repeated measures ANOVA was conducted to compare anxiety levels across these four dimensions. Mauchly's test indicated that the assumption of sphericity was violated ($p < .001$) (Table 3). Therefore, the Greenhouse-Geisser corrected results were interpreted. The test showed a statistically significant main effect of anxiety dimension, $F(2.37, 175.39) = 8.03$, $p < .001$, partial $\eta^2 = .098$ (Table 4), indicating significant differences in anxiety intensity among the four dimensions.

Table 3. Mauchly's Test of Sphericity

Within-Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse -Geisser	Huynh -Feldt	Lower -bound
Anxiety Dimension	**0.698**	**26.173**	**5**	**<.001**	**0.790**	**0.818**	**0.333**

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. Design: Intercept. Within Subjects Design: Anxiety Dimension.

b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the "Tests of Within-Subjects Effects" table.

Table 4.

		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Anxiety Dimension	Sphericity Assumed	8.348	3	2.783	8.028	<.001	0.098
	Greenhouse-Geisser	8.348	2.370	3.522	8.028	<.001	0.098
	Huynh-Feldt	8.348	2.454	3.402	8.028	<.001	0.098
	Lower-bound	8.348	1.000	8.348	8.028	0.006	0.098
Error (Anxiety Dimension)	Sphericity Assumed	76.952	222	0.347			
	Greenhouse-Geisser	76.952	175.394	0.439			
	Huynh-Feldt	76.952	181.580	0.424			
	Lower-bound	76.952	74.000	1.040			

Post-hoc pairwise comparisons with Bonferroni correction (Table 5) were performed to locate these differences. The results showed:

1. Cognitive anxiety was significantly higher than physiological anxiety (Mean Difference = 0.39, $p < .001$).
2. Physiological anxiety was significantly lower than both behavioral anxiety (Mean Difference = -0.42, $p < .001$) and evaluative anxiety (Mean Difference = -0.33, $p = .005$).
3. No significant differences were found between cognitive and behavioral anxiety ($p = .775$), cognitive and evaluative anxiety ($p = .522$), or behavioral and evaluative anxiety ($p = .240$).

Table 5.

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference - Lower	95% Confidence Interval of the Difference - Upper			
1	Cognitive - Physiological	0.39000	0.70380	0.08127	0.22807	0.55193	4.799	74	<.001
2	Cognitive - Behavioral	-0.02667	0.80348	0.09278	-0.21153	0.15820	-0.287	74	0.775
3	Cognitive - Evaluative	0.06333	0.85235	0.09842	-0.13278	0.25944	0.643	74	0.522
4	Physiological - Behavioral	-0.41667	0.93987	0.10853	-0.63291	-0.20042	-3.839	74	<.001

5	**Physiological - Evaluative**	**-0.32667**	**0.98765**	**0.11404**	**-0.55391**	**-0.09943**	**-2.864**	**74**	**0.005**
6	**Behavioral - Evaluative**	**0.09000**	**0.65829**	**0.07601**	**-0.06146**	**0.24146**	**1.184**	**74**	**0.240**

Furthermore, all four anxiety dimensions were found to be positively and significantly correlated with each other (all $p < .05$), as shown in Table 6, suggesting that while their intensities differ, they are interrelated components of writing anxiety.

Table 6.

Pair	Dimensions	N	Correlation	Sig.
1	**Cognitive & Physiological**	**75**	**0.715**	**<.001**
2	**Cognitive & Behavioral**	**75**	**0.468**	**<.001**
3	**Cognitive & Evaluative**	**75**	**0.395**	**<.001**
4	**Physiological & Behavioral**	**75**	**0.369**	**0.001**
5	**Physiological & Evaluative**	**75**	**0.284**	**0.014**
6	**Behavioral & Evaluative**	**75**	**0.421**	**<.001**

3.5.2 Association between Demographic Factors and Writing Anxiety

Research Question 2: Which demographic factors (gender, grade level, English proficiency, years of English study) are significantly associated with writing anxiety levels?

Gender: Independent samples t-tests were conducted to compare anxiety levels between male (n=9) and female (n=66) students (Table 7 & Table 8). No statistically significant differences were found in the overall anxiety total score ($p = .496$) or in any of the four sub-dimensions (all $p > .05$: cognitive p=.854, physiological p=.800, behavioral p=.209, evaluative p=.764). This indicates that gender was not a significant factor associated with writing anxiety levels in this sample.

Table 7.

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Cognitive Dimension	**Male**	**9**	**3.3889**	**0.89365**	**0.29788**
Cognitive Dimension	**Female**	**66**	**3.4470**	**0.88199**	**0.10857**
Physiological Dimension	**Male**	**9**	**2.9722**	**1.05656**	**0.35219**
Physiological Dimension	**Female**	**66**	**3.0606**	**0.96781**	**0.11913**
Behavioral Dimension	**Male**	**9**	**3.2222**	**0.60656**	**0.20219**
Behavioral Dimension	**Female**	**66**	**3.5000**	**0.61853**	**0.07614**

Evaluative Dimension	**Male**	**9**	**3.3194**	**0.83645**	**0.27882**
Evaluative Dimension	**Female**	**66**	**3.3845**	**0.57232**	**0.07045**
Total Score	**Male**	**9**	**71.44**	**15.444**	**5.148**
Total Score	**Female**	**66**	**74.32**	**11.280**	**1.388**

Table 8.

		Levene's Test for Equality of Variances		**t-test for Equality of Means**						
									95% Confidence Interval of the Difference	
		F	**Sig.**	**t**	**df**	**Sig. (2-tailed)**	**Mean Difference**	**Std. Error Difference**	**Lower**	**Upper**
Cognitive Dimension	**Equal variances assumed**	**0.002**	**0.967**	**-0.185**	**73**	**0.854**	**-0.05908**	**0.31386**	**-0.68360**	**0.56744**
	Equal variances not assumed			**-0.183**	**10.244**	**0.858**	**-0.05908**	**0.31705**	**-0.76224**	**0.64608**
Physiological Dimension	**Equal variances assumed**	**0.006**	**0.941**	**-0.254**	**73**	**0.800**	**-0.08838**	**0.34749**	**-0.78093**	**0.60417**
	Equal variances not assumed			**-0.238**	**9.919**	**0.817**	**-0.08838**	**0.37179**	**-0.91770**	**0.74093**
Behavioral Dimension	**Equal variances assumed**	**0.007**	**0.934**	**-1.267**	**73**	**0.209**	**-0.27778**	**0.21932**	**-0.71489**	**0.15933**
	Equal variances not assumed			**-1.286**	**10.404**	**0.226**	**-0.27778**	**0.21605**	**-0.75664**	**0.20108**
Evaluative Dimension	**Equal variances assumed**	**2.182**	**0.144**	**-0.302**	**73**	**0.764**	**-0.06503**	**0.21565**	**-0.49482**	**0.36477**
	Equal variances not assumed			**-0.226**	**9.050**	**0.826**	**-0.06503**	**0.28758**	**-0.71503**	**0.58498**
Total Score	**Equal variances assumed**	**3.253**	**0.075**	**-0.685**	**73**	**0.496**	**-2.874**	**4.196**	**-11.236**	**5.489**
	Equal variances not assumed			**-0.539**	**9.200**	**0.603**	**-2.874**	**5.332**	**-14.896**	**9.148**

Grade Level: One-way ANOVAs were performed to examine the impact of grade level (four groups) on writing anxiety (Table 9). The results indicated a significant difference in cognitive anxiety across grade levels, $F(3, 71) = 4.907$, $p = .004$. However, no significant differences were found for the overall

total score (p = .125), physiological (p = .265), behavioral (p = .189), or evaluative anxiety (p = .441) across grades. Preliminary tests (Table 10) confirmed that the assumption of homogeneity of variances was met for these analyses (all p > .05).

Table 9.

		Levene Statistic	df1	df2	Sig.
	Based on Mean	0.599	3	71	0.618
Total Score	Based on Median	0.448	3	71	0.720
	Based on Median and with adjusted df	0.448	3	62.515	0.720
	Based on trimmed mean	0.587	3	71	0.626
	Based on Mean	1.235	3	71	0.304
Cognitive	Based on Median	0.858	3	71	0.467
Dimension	Based on Median and with adjusted df	0.858	3	55.815	0.468
	Based on trimmed mean	1.228	3	71	0.306
	Based on Mean	0.746	3	71	0.528
Physiological	Based on Median	0.738	3	71	0.533
Dimension	Based on Median and with adjusted df	0.738	3	66.891	0.533
	Based on trimmed mean	0.791	3	71	0.503
	Based on Mean	0.523	3	71	0.668
Behavioral	Based on Median	0.436	3	71	0.728
Dimension	Based on Median and with adjusted df	0.436	3	69.424	0.728
	Based on trimmed mean	0.503	3	71	0.681
	Based on Mean	3.105	3	71	0.032
Evaluative	Based on Median	2.421	3	71	0.073
Dimension	Based on Median and with adjusted df	2.421	3	54.364	0.076
	Based on trimmed mean	3.128	3	71	0.031

Table 10. ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
	Between Groups	789.221	3	263.074	1.976	0.125
Total Score	Within Groups	9454.726	71	133.165		
	Total	10243.947	74			
Cognitive	Between Groups	9.785	3	3.262	4.907	0.004
Dimension	Within Groups	47.195	71	0.665		
	Total	56.980	74			

Physiological Dimension	**Between Groups**	**3.770**	**3**	**1.257**	**1.350**	**0.265**
	Within Groups	**66.105**	**71**	**0.931**		
	Total	**69.875**	**74**			
Behavioral Dimension	**Between Groups**	**1.836**	**3**	**0.612**	**1.634**	**0.189**
	Within Groups	**26.586**	**71**	**0.374**		
	Total	**28.422**	**74**			
Evaluative Dimension	**Between Groups**	**0.996**	**3**	**0.332**	**0.909**	**0.441**
	Within Groups	**25.926**	**71**	**0.365**		
	Total	**26.922**	**74**			

Years of English Study: Correlation analysis (Table 11) showed that the number of years spent learning English had no significant correlation with any of the four anxiety dimensions (all $p > .05$) or with the total anxiety score. Therefore, the length of English study was not associated with writing anxiety levels.

Table 11.

	Variables	**Years of Study**	**Cognitive Dimension**	**Physiological Dimension**	**Behavioral Dimension**	**Evaluative Dimension**
Years of Study	**Pearson Correlation**	**1**	**-0.089**	**-0.085**	**0.131**	**0.091**
	Sig. (2-tailed)		**0.447**	**0.468**	**0.263**	**0.436**
	N	**75**	**75**	**75**	**75**	**75**
Cognitive Dimension	**Pearson Correlation**	**-0.089**	**1**	**0.715****	**0.468****	**0.395****
	Sig. (2-tailed)	**0.447**		**<.001**	**<.001**	**<.001**
	N	**75**	**75**	**75**	**75**	**75**
Physiological Dimension	**Pearson Correlation**	**-0.085**	**0.715****	**1**	**0.369****	**0.284***
	Sig. (2-tailed)	**0.468**	**<.001**		**0.001**	**0.014**
	N	**75**	**75**	**75**	**75**	**75**
Behavioral Dimension	**Pearson Correlation**	**0.131**	**0.468****	**0.369****	**1**	**0.421****
	Sig. (2-tailed)	**0.263**	**<.001**	**0.001**		**<.001**
	N	**75**	**75**	**75**	**75**	**75**
Evaluative Dimension	**Pearson Correlation**	**0.091**	**0.395****	**0.284***	**0.421****	**1**
	Sig. (2-tailed)	**0.436**	**<.001**	**0.014**	**<.001**	
	N	**75**	**75**	**75**	**75**	**75**

Correlation is significant at the 0.01 level (2-tailed).

Correlation is significant at the 0.05 level (2-tailed).

3.5.3 Writing Avoidance Behaviors and Implication for AI Tool Reliance

Research Question 3: Do students with high writing anxiety exhibit significantly greater writing avoidance behaviors (as measured by items X8,X12,X13,X14) compared to low-anxiety students, and how might these behavioral patterns indirectly suggest a latent reliance on AI tools for anxiety mitigation?

Students were divided into high and low anxiety groups based on the 33rd and 66th percentiles of their overall anxiety mean scores (Table 12). An independent samples t-test was then conducted to compare the writing avoidance behavior scores (the mean of items X8, X12, X13, X14) between these two groups.

Table 12. Overall Mean

N	**Valid**	**75**
	Missing	**0**
Std. Deviation		**0.53480**
Minimum		**1.59**
Maximum		**4.45**
Percentiles	**33**	**3.0909**
	66	**3.6364**

Table 13. Group Statistics for Writing Avoidance

Overall Mean (Binned)		**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Writing Avoidance Mean	**Low Anxiety**	**24**	**2.6458**	**0.71062**	**0.14505**
	High Anxiety	**24**	**4.0729**	**0.68951**	**0.14075**

The test results (Table 14) showed a statistically significant difference between the groups. The Levene's test indicated equal variances ($p = .942$). The t-test result was $t(46) = -7.061$, $p < .001$. The mean difference was -1.42708, indicating that the high anxiety group ($M = 4.07$) had significantly higher writing avoidance behavior than the low anxiety group ($M = 2.65$).

Table 14.

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Writing Avoidance Mean	Equal variances assumed	0.005	0.942	-7.061	46	<.001	-1.42708	0.20212	-1.83392	-1.02025
	Equal variances not assumed			-7.061	45.958	<.001	-1.42708	0.20212	-1.83393	-1.02024

This pronounced avoidance among high-anxiety students, particularly behaviors aimed at evading writing situations (e.g., making excuses, avoiding writing unless necessary), creates a context where the need to produce written output conflicts with the desire to avoid anxiety. This conflict may drive students to seek alternative, less anxiety-provoking methods to complete writing tasks. While the current data does not directly test the correlation between avoidance and AI tool use (item X0), the behavioral pattern itself indirectly suggests a potential latent reliance on AI-assisted writing tools. These tools could be perceived as a viable strategy to mitigate anxiety by reducing the perceived difficulty of writing, providing linguistic support, and lowering the fear of producing low-quality work, thereby serving as a coping mechanism for students who otherwise tend to avoid writing.

3.5.4 Correlation Between Physiological/Cognitive and Evaluative Anxiety

Research Question 4: How do students' physiological and cognitive anxiety responses correlate with their evaluative concerns?

Correlation analysis (Table 6) provides direct evidence for the relationships between these constructs:

1. Cognitive and Evaluative Anxiety: A significant positive correlation was found ($r = .395$, $p < .001$). This indicates that students who experience greater mental confusion or blankness during writing also tend to harbor stronger concerns about being judged or receiving poor evaluations.

2. Physiological and Evaluative Anxiety: A significant positive correlation was also found, though slightly weaker ($r = .284$, $p = .014$). This suggests that somatic symptoms like trembling, sweating, or a racing heart are associated with, though not as strongly tied to, fears about evaluation.

These correlations, confirmed by the paired samples test showing physiological anxiety is significantly lower than evaluative anxiety (Table 5), reveal an interconnected anxiety network. Evaluative concerns form a core component that is significantly linked to both the cognitive and physiological

manifestations of writing anxiety. The fear of a negative outcome appears to co-occur with the experience of stress that impacts both mind and body during the writing process.

4. Results and Discussion

This chapter presents the key findings of the study and situates them within the broader scholarly conversation. The Results section reports the empirical answers to the four research questions. The Discussion section then interprets these findings, highlighting their connections to existing literature, explicating their theoretical and practical implications, and demonstrating a comprehensive understanding of the investigated topic.

4.1 Results

The analysis of SLWAI data from 75 English majors yielded the following key findings directly pertinent to the research questions.

First, concerning the overall level of writing anxiety and differences across dimensions (RQ1), data indicated a moderate-to-high level of overall writing anxiety among participants (Total Score M=73.97, SD=11.77). Among the four sub-dimensions, Cognitive Anxiety (M=3.44) and Behavioral Avoidance Anxiety (M=3.47) were the most intense, followed by Evaluative Anxiety (M=3.38), with Physiological Anxiety being the least intense (M=3.05). A one-way repeated-measures ANOVA revealed a statistically significant main effect for the anxiety dimension ($F(2.370, 175.394)=8.028$, $p<.001$, partial $\eta^2=.098$). Post-hoc pairwise comparisons specified that Cognitive Anxiety was significantly higher than Physiological Anxiety ($p<.001$), while Physiological Anxiety was significantly lower than both Behavioral ($p<.001$) and Evaluative Anxiety ($p=.005$). No significant differences were found between Cognitive and Behavioral, Cognitive and Evaluative, or Behavioral and Evaluative Anxiety.

Second, regarding the association between demographic factors and writing anxiety levels (RQ2), independent samples t-tests showed no significant gender differences in the total score or any sub-dimension scores (all $p>.05$). A one-way ANOVA indicated that grade level had a significant effect only on Cognitive Anxiety ($F(3,71)=4.907$, $p=.004$), but not on the total score or other sub-dimensions. Pearson correlation analysis further revealed that the number of years spent learning English had no significant correlation with any dimension of writing anxiety.

Third, pertaining to writing avoidance behaviors and their implication for AI tool reliance (RQ3), students were grouped into high and low anxiety based on percentiles of their overall anxiety mean. An independent samples t-test showed that the high-anxiety group (M=4.07, SD=0.69) exhibited significantly greater writing avoidance behaviors (composite of X8, X12, X13, X14) than the low-anxiety group (M=2.65, SD=0.71), $t(46) = -7.061$, $p<.001$ (Tables 18 & 19). This pronounced behavioral avoidance provides indirect, behavioral evidence for the potential latent reliance on AI writing tools as an anxiety mitigation strategy among high-anxiety students.

Finally, concerning the correlation between physiological/cognitive and evaluative anxiety responses

(RQ4), correlation analysis showed a significant, moderate positive correlation between Cognitive and Evaluative Anxiety ($r=.395$, $p<.001$). A significant but weaker positive correlation was also found between Physiological and Evaluative Anxiety ($r=.284$, $p=.014$). This indicates that concerns about negative evaluation are significantly linked to both the mental confusion and somatic tension experienced during writing.

4.2 Discussion

The findings of this study both align with and extend the existing literature on L2 writing anxiety, offering nuanced insights into its multidimensional nature and potential contemporary dynamics among English majors.

The finding of a moderate-to-high overall level of writing anxiety corroborates the well-established pervasiveness of this affective barrier in foreign language learning contexts (Cai, Liu, & Lu, 2015). However, the nuanced ranking of the dimensions—with Cognitive and Behavioral anxiety being most prominent—adds specificity to the general model. This suggests that for these learners, the primary struggle may reside internally with organizing thought and externally with avoiding the task itself, rather than being dominated solely by fear of external judgment. This refines the application of Krashen's (1982) Affective Filter Hypothesis, indicating that the "filter" operates strongly not just on input (cognitive blocking) but also on output generation, manifesting as behavioral avoidance.

Regarding demographic factors, the non-significant effect of gender contrasts with some domestic studies (e.g., Zhang et Yang, 2022), indicating that gender may not be a primary differentiating factor for writing anxiety in certain contexts or samples. The significant effect of grade level only on cognitive anxiety hints at a dynamic evolution in how students manage the cognitive complexities of writing as they progress, warranting longitudinal investigation. The lack of correlation with years of English study underscores that mere exposure time does not automatically alleviate writing anxiety, redirecting intervention focus toward qualitative factors like strategy instruction and self-efficacy enhancement (Wang, 2024).

The finding regarding writing avoidance and its link to potential AI reliance is a central contribution. The significantly stronger avoidance behavior in high-anxiety students aligns with fundamental psychological principles where anxiety motivates escape. In the digital age, this avoidance may find a new outlet: AI-assisted writing tools. While causality is not established here, the logical inference is compelling. For students seeking to circumvent the daunting process of writing from scratch due to anxiety, tools that generate text and provide edits can become an attractive "crutch" or buffer. This raises a critical, novel question for future inquiry in line with explorations of technology's role in learning: Does AI tool use serve as an effective "anxiety-coping strategy," or does it foster an "avoidant dependency" that may undermine long-term writing development?

Finally, the significant correlations between evaluative concerns and both cognitive and physiological anxiety validate writing anxiety as a multidimensional construct with interrelated components. Evaluative anxiety appears to act as a core driver that can simultaneously trigger cognitive disruption

and physiological arousal. This integrative finding suggests that effective interventions must be holistic, addressing not only the fear of evaluation but also providing training in cognitive regulation and relaxation techniques under pressure, thereby responding to the complex, interconnected nature of the anxiety experience.

5. Conclusion

This study investigated the multidimensional characteristics of writing anxiety among English majors through a quantitative lens. The major findings include: 1) Students exhibited a moderate-to-high overall level of writing anxiety, with cognitive and behavioral dimensions being most intense and significant differences existing between dimensions; 2) Among the demographic factors examined, only grade level showed a significant association (with cognitive anxiety), while gender and years of English study did not; 3) Students with high writing anxiety demonstrated significantly greater writing avoidance behaviors, indirectly suggesting a potential latent reliance on AI tools as an anxiety-avoidance mechanism in the digital era; 4) Students' evaluative anxiety was significantly positively correlated with both their cognitive and physiological anxiety responses, revealing the interconnected nature of the anxiety dimensions.

These findings carry several implications. Theoretically, they enrich the multidimensional model of writing anxiety, particularly within the Chinese EFL context, and introduce a new perspective on "digital-age writing anxiety and avoidance," bridging traditional anxiety research with emergent issues of technology use. Practically, for educators and curriculum designers, the results underscore the need to design writing instruction and assessment that reduces cognitive load and fear, perhaps through process writing and peer feedback. Furthermore, it is crucial to proactively address the proliferation of AI tools by guiding students toward their critical and responsible use as learning aids, not as substitutes that allow them to bypass writing challenges, thereby integrating digital literacy into writing pedagogy.

This study also has limitations. Its cross-sectional design precludes causal inferences. The sample size, while adequate for the analyses, is limited and drawn from a specific population, which may affect generalizability. The measurement of AI tool use was limited to a single item (X0), preventing a deeper exploration of the frequency, manner, and motivation behind its use in relation to anxiety.

Based on these conclusions and limitations, future research could: 1) Employ longitudinal or experimental designs to explore the causal relationships between writing anxiety, writing performance, and AI tool use. 2) Expand the sample size and diversity to enhance external validity. 3) Conduct mixed-methods studies, using interviews or diaries, to gain an in-depth understanding of the motivations, experiences, and long-term impacts of AI tool use among high-anxiety students. 4) Develop and test targeted pedagogical interventions designed to help students manage writing anxiety while learning to use AI tools ethically and effectively.

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