

# How Cognitive Anxiety Affects English Language Grammar and Punctuation Sub-scales; Does Gender Play any Role? A Case Study Among Iranian Medical Students

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## Abstract

**Introduction:** The present study focuses on the relationship between cognitive anxiety and the knowledge of grammar and punctuation sub-scales among Iranian Medical Students. **Materials and Methods:** The Second Language Writing Anxiety Inventory (SLWAI) developed by Cheng (2004) and also a writing performance test were applied to collect the data. 45 students were invited to participate in this study. **Results:** Revealed by T-test analysis, the male participants experience relatively greater amount of cognitive anxiety. Furthermore, significant differences were found in grammar and punctuation sub-scales of writing performance between male and female participants so that females were higher in two sub-scales than that of males. **Conclusion:** Based on the findings, cognitive anxiety was the most common type of anxiety, followed by somatic anxiety, and avoidance behavior. The results also highlighted the fact that in the classes teachers should be cautious of the dangers of anxiety and try to make the atmosphere of class as stress-free as possible in order to improve students' performance.

**Keywords:** Cognitive anxiety; Grammar; Punctuation; Medical students.



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## 1. Introduction

Generally, the writing process is believed to contribute in the development of learners cognitive skills in attaining the required strategies in the learning process such as analysis, synthesis, inference, etc (Bacha, 2002). However, most of Iranian EFL students have been found to have an inadequate competence in L2 writing (Jafari and Ansari, 2012). Second language researchers and theorists have long been aware that anxiety is often associated with second language learning. Teachers and learners generally feel that anxiety is a major obstacle to be overcome in second language learning (Horwitz *et al.*, 1986). In advanced American English Longman (2005), anxiety is defined as "a feeling of being very worried about something that may happen or may have happened, so that you think about it all the time or is a feeling of wanting to do something very much, but being very worried that you will not succeed. It is associated with feelings of uneasiness, frustration, self-doubt, apprehension, or worry" Sioson (2011). Research studies with L1 writers show that language writing anxiety has an adverse effect on their writing outcome (Lee and Krashen, 1997; Schmidt, 2004). Therefore, an implication would be that the writing performance of EFL learners might be affected by levels of anxiety. With respect to the Iranian EFL context, to the best of the researchers' knowledge, no published research has investigated the relationship between cognitive anxiety and the knowledge of grammar and punctuation sub-scales among Iranian male and female EFL learners. The present study aims at filling this methodological gap.

## 2. Methodology

### 2.1. Sample

45 medical students, including 26 males and 19 females took part in this study. They were drawn from Ilam university of Medical Sciences in Ilam province in Iran.

### 2.2. Instrumentation

In the present study two instruments were used to collect the data. The first was Second Language Writing Anxiety Inventory (SLWAI) questionnaire. It consists of 22 items, based on the SLWAI which was designed to assess if there is writing anxiety among students. The SLWAI scored on a five-point likert response scale ranging from 1 (strongly disagree) to 5 (strongly agree), the next instrument was a writing performance test based on IELTS writing which was measured by subjects' grade. Reliability and validity of the English version of the test had already been proved by the author.

### 2.3. Data Collection and Analysis Procedure

A pilot study followed by a needs analysis project was run to revise the questionnaire. After doing the necessary revision and modifications, some factors were added to make the items more clear and detailed. Then, the questionnaire was administrated. In general, it took 16 days to distribute the questionnaire and collect the data. The time allocated for completing questionnaire was roughly 18 minutes, and about writing performance the participants were asked to write an English composition within 45 minutes in class to see if the punctuation sub-scales are used

or not, the composition was administrated and evaluated by the researcher himself. Each composition was graded on a 5-point scale which includes five aspects: Scrawl, Misspell, Grammar, Neat writing, and Punctuation. Successive to data collection phase, the obtained data was analyzed through utilizing SPSS and via running a descriptive statistics and independent samples T-test.

### 3. Results

One of the main objectives of this study was to find out if there was any difference between Iranian male and female students in writing performance considering cognitive anxiety. For this purpose, the related data was collected and analyzed. In order to respond the question posed in the study, descriptive statistics and independent T-test were run.

**Table-1.** Descriptive Statistics of Level of Anxiety in the Participants

Anxiety	Females		Males	
	Frequency	Percent	Frequency	Percent
Low anxiety	5	15.8	9	23.1
Moderate anxiety	4	31.6	9	26.9
High anxiety	10	52.6	8	50.0
Mean	58.3684		52.5000	
Std Deviation	10.08966		9.84784	
Std Error Mean	2.31473		1.93132	

According to [Table 1](#) the mean score of Anxiety for females was 58.36 with standard deviation of 10.08, but the mean score for males was 52.5 with standard deviation of 9.8. The male participants might experience relatively greater amount of anxiety related to writing performance. In order to see if the differences in the three types of anxiety between the means of the two groups were statistically significant or not independent sample T-tests and descriptive statistics were computed. The results of using independent sample T-tests are shown in [table 2](#) below.

**Table-2.** Independent Sample T-test of Difference in Three Types of Anxiety

	Gender	Mean	Std deviation	Levene's Test for Equality of Variances		T-Test for Equality of Means		
				F	Sig	t	df	Sig. (2-tailed)
Cognitive Anxiety	Female	20.9474	2.9528	4.191	0.047	0.178	43	0.043
	Male	20.7308	4.66097					
Somatic Anxiety	Female	18.7368	2.5351	2.704	0.107	-0.075	43	0.940
	Male	18.8077	3.4758					
Avoidance Behavior	Female	19.2105	3.44124	0.000	0.0372	1.236	43	0.65
	Male	18.9615	3.28001					

The results of data analysis (T-test) in [table 2](#) indicates that there exists statistically significant differences between gender in three types of anxiety so that ( $M= 20.73$   $SD= 4.66$ ,  $M= 21$   $SD= 2.95$ ) in male and female respectively. Obtained  $t$  value of 0.178 was found to be significant at  $p<0.05$ . [Table 3](#) reveals descriptive statistics and independent sample T-test of differences in subscales of writing performance between genders.

**Table-3.** Independent Sample T-test of Difference in Sub-scales of Writing Performance

	Gender	Mean	Std deviation	Levene's Test for Equality of Variances		T-Test For Equality Of Means		
				F	Sig	t	df	Sig. (2-tailed)
Scrawl	Female	12.00	6.5659	0.002	0.961	-0.626	43	0.534
	Male	13.269	6.8209					
Misspell	Female	12.052	6.6288	0.502	0.483	-0.211	43	0.834
	Male	12.500	7.3225					
Grammar	Female	12.473	5.081	2.86	0.98	-2.547	43	0.015
	Male	7.923	6.247					
Neat Writing	Female	9.947	4.156	0.878	0.354	-0.744	43	0.461
	Male	11.00	5.035					
Punctuation	Female	11.526	5.689	0.072	0.789	-2.043	43	0.047
	Male	7.000	5.928					

As it is evident in [table3](#), there exists significant difference in grammar and punctuation subscales of writing performance between females and males ( $t= -2.547$ ,  $p< 0.05$ ,  $t= -2.043$ ,  $p<0.05$ ) respectively. The current study indicates that females were higher than that of males considering the effect of anxiety on grammar and punctuation subscales.

## 5. Discussion

The results of this study revealed that, there is a significant difference between females and males considering anxiety level. The female participants might experience relatively greater amount of anxiety related to writing performance. The result of the current study, in this respect, is line with what was reported by Sadeghi, Sahragard & Jafari's, who pointed that the females were more anxious than males (Sadighi *et al.*, 2009). Aida (1994) found no significant difference in language anxiety between male and female students; however, the findings appear to provide parallel evidence with the findings of Na (2007) who in his study reported that the male students had higher anxiety of English classes than female counterparts. The results of the SLWAI subscales between genders also indicated that cognitive anxiety is the most common type of writing anxiety experienced by Iranian medical students. Furthermore cognitive anxiety level in females was higher than that of males. These findings are in part in line with the results of Cheng (2004) that cognitive anxiety related closely to test anxiety and could have a great influence on L2 writing performance. Furthermore, there is a significant difference in grammar and punctuation subscales of writing performance between females and males. The current study indicated that females were higher than that of males in the effect of anxiety on grammar and punctuation subscales. The other studies declared that anxiety and frustration in writing may be caused by excessive and improper stress on superficial errors in spelling and grammar (Elias *et al.*, 2005). Regarding the above mentioned results, it is essential for practitioners to be aware of the strong impact of anxiety not only on learners' performance but also on educational setting as they enhance learners' achievement.

## 6. Conclusion

Regarding anxiety, similar to a lot of abstract mental concepts, the more care is devoted to; the more questions will be risen. It seems that if the teachers take this issue into account, some of the students' problem about their writing, competency, and proficiency could be solved. As a conclusion to the study it can be said that by taking advantage of the facilitative aspect of anxiety, the students' writing performance will be improved.

Considering the Implications of the study, the present study provides valuable implications for teachers. First of all, teachers can create more relaxed-stress free- environments for students. Second, although the teachers are advised to create relaxed environments for the students, but they should not try to help students get away from anxiety completely. Much research indicates that adequate anxiety plays a positive role and can motivate students to maintain their efforts on learning. Therefore, the teachers' real job is to help students keep adequate anxiety, neither too high nor too low (Mesri, 2012; Na, 2007) because completely avoiding all these anxiety-provoking situations is neither practical nor helpful (Horwitz *et al.*, 1986).

## 7. Limitations

Several limitations of the study need to be pointed out. First, the results cannot be generalized to all Iranian EFL educational settings due to the fact that a limited number of students were selected from a university located in a specific region in Iran. The second drawback of this study relates to the employed data collection instrument, SLWAI. This type of survey questionnaire would be supplemented with further data collection techniques such as semi-structured interviews, classroom observations, and diaries. As a whole, this study was a preliminary attempt to uncover the anxiety of a community of Iranian students. Further investigations are required to support the findings of the present study, explore anxiety-provoking factors, and discover anxiety-reducing techniques in more specified learning contexts in order to open more windows to the psychological aspects of language learning and teaching.

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