Exploring the Impact of Learner Factors on English-Persian Consecutive Interpreting: Anxiety in Focus

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Abstract

Interpreting is a challenging and stressful activity that requires real-time processing of complex information. As psychological factors such as anxiety can significantly impact an interpreter's performance, it is crucial to consider addressing these concerns in interpreter training programs. This study aimed to investigate stressors in consecutive interpreting (CI) and the interplay among various learner factors and the outcome of CI in Iranian classrooms. The study focused on four potential stressors, foreign language classroom anxiety (FLCA), interpreting classroom anxiety (ICA), trait and state anxiety. A quantitative approach was used to examine 88 CI students. The results showed that trait anxiety had the greatest impact, followed by state anxiety and foreign language classroom anxiety, while interpreting anxiety had the lowest impact on CI students. Furthermore, the study found significant positive correlations between the different anxiety factors and that all four predictors had a significant negative impact on CI exam scores. Trait anxiety was the strongest predictor, followed by ICA, state anxiety, and FLCA. The study contributes to the limited research on Interpreting Studies in Iran and highlights the importance of addressing anxiety in interpreter training programs to improve student awareness of the impact of anxiety on their CI performance.

Keywords: Consecutive Interpreting (CI); Foreign Language Anxiety; Interpreting Anxiety; State Anxiety; Trait Anxiety

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1. Introduction

Interpreting as a kind of oral meaning transfer is an inherently stressful activity (Gile, 2009; Pöchhacker, 2016). Regardless of formal training and experience, a degree of difficulty is typically encountered and must be managed (Chiang, 2009; Cooper et al., 1982; Hale et al., 2022; Kurz, 2003; Kalina, 2000; Moser-Mercer et al., 1998). Moreover, conducting "a series of complex cognitive and psychomotor operations in public or at least in the presence of the public" transforms interpreting into an inherently stressful linguistic activity (Jimenez & Pinazo, 2001, p. 105).

As stated by Cooper et al. (1982) anything that disrupts an interpreter's attention (e.g., a sneeze, a cough, a change in loudness, or someone speaking) degrades the interpreter's performance and, if it persists, can lead to a higher degree of stress. Ivars and Calatayud (2013) assert that regrettably interpreters' level of stress does not reduce easily. Additionally, Yan et al. (2018) believe that successful interpreters should be fluent speakers, effective communicators, extroverts, and eager to communicate, as interpreting takes a high level of spoken language proficiency and confidence. Psychologists assert that stress is a normal, intrinsic response to a dangerous or threatening circumstance. Even when monolingual classroom presentations are required, students become anxious. It is often observed that foreign language classes can be stressful for students, particularly due to the emphasis on speaking and comprehension in a non-native language. It goes without saying that in interpreting classes the amount of stress trainee interpreters endure is magnified, as these classes have both the stressful character of foreign language classes and the stressful nature of interpreting itself.

Research on psychological aspects such as state and trait anxiety, as well as interpreting classroom anxiety and foreign language classroom anxiety, is crucial in the training of interpreters. These psychological factors can significantly affect an interpreter's ability to perform their job effectively, and understanding them is key to developing effective training programs. According to a study by Dewaele and MacIntyre (2014), foreign language classroom anxiety can have a negative impact on language learning and performance. Additionally, a study by Spielberger and Vagg (1995) highlights the importance of measuring both state and trait anxiety in individuals, as both can have significant impacts on behavior and performance. By understanding these psychological factors, educators and trainers can develop strategies to help interpreters manage their anxiety and perform at their best. Therefore, while interpreting is inherently stressful, it seems that addressing other types of anxiety that student interpreters may experience, such as trait anxiety, foreign language classroom anxiety, and state anxiety, may be important to improve their performance. This highlights the importance of addressing the broader psychological and emotional needs of student interpreters, in addition to providing them with training and support to improve their

interpreting skills.

The teaching and learning of interpreting are a complex process for both instructors and students. To put it in Hansen and Shlesinger's (2007, p. 97) words, interpreting is a "much-revered, much-feared skill to be acquired," which is "very different from anything the students has experienced before," hence instructors are encouraged to help students cultivate optimistic perspectives about the interpreting learning process. Logically, performing the multiple tasks necessary for consecutive interpreting is a highly anxiety-inducing activity (Jimenez & Pinazo, 2001; Seleskovitch, 1978). In addition, as mentioned by Kao and Craigie (2013), unlike their professional counterparts, student interpreters lack years of experience, considerable working knowledge, and fluent information retrieval. All of these issues may hamper their ability to manage stress. In addition, Kurz (2003) discovered that student interpreters faced considerably more psychological stress in the classroom than expert interpreters did at a challenging technical conference. Consequently, to lessen the complexity of this procedure, scholars have always sought to determine what makes a good learner of interpreting and how they learn (Kelly & Way, 2007). Consequently, attempts have been made to cover these topics through research on interpreter aptitude (Russo, 2014; Shlesinger & Pöchhacker, 2011), interpreter profiling (Brisau et al., 1994), and the interplay among several learner factors in interpreting classrooms (Yan et al., 2018).

As a product-based approach, the present quantitative study decided to examine four possible stressors in CI educational settings in Iran, namely foreign language classroom anxiety (FLCA), interpreting classroom anxiety (ICA), trait and state anxiety. The significance of the present study can be regarded from two distinct perspectives. In the first place, this study decided to make up for the dearth of research undertaken in Interpreting Studies (IS) in Iran (Shafiei & Barati, 2015). In accordance with Hale and Napier's (2013, pp. 19-20) emphasis on the significance of conducting research in IS whose findings "can be applied to address practical problems faced by interpreters, interpreter educations, interpreting students, and interpreting service users," this study is significant in that it highlights the importance, usefulness, and practical applications of research in interpreting studies.

In the second place, the study aimed to investigate the role of different stressors on student interpreters in a pedagogical environment. As stated previously, interpreting is a stressful activity, and the amount of stress experienced by student interpreters is greater than that of professional interpreters. Furthermore, the capacity to identify stressors in interpreting and to manage them is a crucial skill for successful interpreters (Brisau et al., 1994; Longley, 1989; Lopez Gomez et al., 2007). This considered, investigating the role of anxiety in interpreting could have favorable outcomes for both students

and instructors. In other words, by increasing students' awareness of stress, the learning process would be facilitated. To reach the aims of the study, the following questions were posed:

RQ1. How severe is the stress experienced by student interpreters in terms of foreign language classroom anxiety, interpreting classroom anxiety, trait and state anxiety?

RQ2. What is the relationship between foreign language classroom anxiety, interpreting classroom anxiety, trait and state anxiety?

RQ3. Which of the four examined stressors predict student interpreters' outcome in consecutive interpreting?

2. Review of the Related Literature

Interpreting is a relatively new field of study, and the majority of its research has focused on the process itself in an effort to better comprehend what actually occurs during the interpreting process, while the physical and psychological working conditions of interpreters have been neglected. It is remarkable because nearly no other occupation is subjected to a similar cognitive load: no physical effort is required or involved, no instruments can be utilized, and everything takes place in the mind. The technical equipment is employed to transmit the acoustic signal straight to the interpreter's ears, not to assist the interpreter in challenging situations. The interpreter is in a position where all decisions are contingent on the actions or words of others (Riccardi et al., 1998).

At the start of a meeting, even experienced and skilled interpreters may feel a certain amount of tension, realizing that there are some unfamiliar elements to deal with, such as new concepts and jargon, difficult accents and pronunciations, and technical glitches. Riccardi et al. (1998) assert that these unknown factors cannot be ruled out. Training and experience can help interpreters apply the right strategies quickly and sometimes automatically, but situations can arise that require additional effort and put more strain on the interpreter. The more unknown elements an interpreter encounters, the greater the psychological burden and stress. Interpreting is considered a demanding activity that requires not only complex professional skills, but also the ability to deal with excessive psychological stress (Cooper et al., 1982; Moser-Mercer et al., 1998). Therefore, the complexity of interpreting is usually frustrating and sometimes even intimidating for many learners. A study by Kurz (2003) shows that student interpreters are exposed to greater psychological stress in the classroom environment than professional interpreters at challenging professional conferences.

Interpreting is seen as a highly stressful activity (Hong, 2003). Interpreters require a great deal of attention and concentration for long periods of time. They have to be able to cope with many challenges throughout the interpreting process, above all always being able to cope with intense time pressures (Riccardi et al., 1998). Anxiety is one of the most widely discussed affective variables in the interpreting literature. In most studies, interpreting anxiety is treated as a transference of other, more common types of anxiety, and is measured by trait anxiety scales or state anxiety scales, or combined trait and state anxiety scales (Gerver, 1974; Jiménez Ivars & Pinazo, 2001; Kurz, 1997; Riccardi, et al., 1998). Subsequent research (Jiménez Ivars & Pinazo, 2001) have attempted to assess the anxiety generated by interpretation through more specific stressors, such as challenging source texts and dread of public speaking.

Interpreters must overcome the fear and stress of public speaking when interpreting. Researchers have long believed that the ability to control anxiety is an important prerequisite for a good interpreter (Cooper et al., 1982; Gile, 2009; Klonowicz, 1994; Longley, 1989; Moser-Mercer, 1985; Moser-Mercer et al., 1998) and predictors of interpretive ability (Alexieva, 1997; Dong et al., 2013). Some researchers have suggested that the ability to control anxiety in interpreting should be considered in interpreting entrance examinations (Moser-Mercer, 1985).

According to Kurz (2003), both 'objective' stress and an interpreter's perception of stress have been found to significantly impact an individual's well-being and task performance. Additionally, interpreting conditions are stressful "as far as they are observed as stressful" (Riccardi et al., 1998. p. 99). As a result, psychological research on anxiety and its outcomes and self-report measures of experienced stress are very important (Morgan et al., 2014).

According to Roy and Metzger (2014), the field of interpreting studies can be approached "from a variety of disciplines- sociology, anthropology, psychology, linguistics and/or a mix of these disciplines" (p. 158). In light of this, the inter-disciplinary character of IS necessitates the utilization of conceptualizations, methodological approaches, and theoretical frameworks from a variety of fields. This considered, the present study was conducted using an interdisciplinary method, with contributions from both Interpreting Studies and Psychology.

3. Method

3.1 Participants

Ninety-five students majoring in English Translation at Shahid Bahonar University of Kerman comprised the study's participants, who were recruited using the convenience sample technique. They were all in their seventh semester

and had enrolled in the 'Consecutive Interpreting' course. None of the participants had prior training or experience in interpreting. All participants had Persian as their A-language and English as their B-language.

To ensure homogeneity among participants regarding their scores on language proficiency test, standard deviation (SD) was used as a criterion for participant selection. A total of 95 students were initially screened for eligibility, and 88 students were selected based on their SD scores. Participants with SD scores greater or lower than 1.5 standard deviations from the mean were excluded from the study. This criterion was chosen based on previous research indicating that participants with extreme scores might exhibit varying performances on consecutive interpreting exam due to their heterogeneous ability in listening skill. After applying the exclusion criteria, a final sample of 88 participants was included in the study.

3.2 Instrumentation

For the purposes of this investigation, 6 distinct instruments were utilized to collect the necessary data. The following sections provide a comprehensive explanation of each instrument.

3.2.1 Language Proficiency Test (LPT)

The listening module of the International English Language Testing System (IELTS) was administered at the start of the study to ensure homogeneity among the participants regarding their listening skill. The inclusion of simply the listening module in the IELTS package was motivated by the fact that CI relies heavily on students' listening skills. Since the input in interpreting is presented orally, a failure in listening comprehension by student interpreters would result in inadequate or no output in the target language.

3.2.2 Trait Anxiety Inventory (TAI)

The TAI is a 20-item self-report scale designed to measure a person's general degree of anxiety independent of any anxiety-provoking incident. According to Spielberger (1985), the TAI has Cronbach alpha coefficients between 0.93 and 0.95.

3.2.3 State Anxiety Inventory (SAT)

The SAT developed by Spielberger et al. (1983) is a 20-item self-report scale used in more than 3300 studies carried out in more than 30 languages. The SAI is designed to capture a person's state of anxiety, the level of anxiety a person feels 'right now, at this moment'.

3.2.4 Foreign Language Classroom Anxiety Scale (FLCAS)

The FLCAS is a 33-item self-report instrument designed to measure anxiety that foreign language learners experience in the language classroom (Horwitz ,1986). It is reported that the FLCAS had a satisfactory level of internal consistency, with Cronbach's alpha = 0.93 (n=108), and test-retest reliability over a period of eight weeks, with r = 0.83 (n= 78, p < .01) (Chiang, 2009).

3.2.5 Interpretation Classroom Anxiety Scale (ICAS)

To examine and measure the anxiety experienced in interpreting classrooms, the study used ICAS designed by Chiang (2006). This instrument employs a 5-point Likert scale ranging from 1 'strongly disagree' to 5 'strongly agree' and includes some items needing reverse scoring. This scale consists of three subscales: fear of interpretation and negative evaluation, cognitive processing anxiety, and low self-confidence. Chiang (2006) revealed alpha coefficients of 0.94 for the overall measure, 0.92 for the fear of interpretation class and negative assessment subscale, 0.80 for the cognitive processing anxiety subscale, and 0.77 for the poor self-confidence subscale.

3.2.6 Consecutive Interpreting Test (CIT)

The researchers used a 5-minute, 385-word speech from Voice of America English News (VOA) to evaluate students' CI skills. The speech was on 'freezing food'. The selected audio clip did not present students with any linguistic or vocabulary challenges. It is important to note that the duration, kind, and difficulty of the audio clip were comparable to those students were exposed to during their classroom CI treatment.

3.3 Data Collection Procedure

The following is an in-depth description of the process that the research went through to gather the data that was used in the study.

The first instrument used to collect data was a language proficiency test that was administered to the participants during one of their class hours. The IELTS (2022) exam required test takers to demonstrate their listening comprehension by answering a total of forty questions. There was no additional time allotted to the test because the duration of the test, which was forty minutes, was predetermined and set by the test itself.

Four distinct scales were utilized to investigate and quantify the trait, state, foreign language, and interpreting classroom anxiety of participants. Using the Porsline.ir website, the researchers created web-based questionnaires. The link

address was communicated to participants via WhatsApp. In accordance with Couper et al. (2001), a progress indicator was established to inform participants of the remaining work. In addition, to prevent respondents from skipping a response, the questionnaire was designed to not deliver the next question until the preceding question had been addressed.

Finally, each participant was required to take a CI test so that their level of interpreting could be evaluated. However, prior to examining their consecutive interpreting ability, the participants first participated in a series of 16 classes lasting 90 minutes each. These classes focused on teaching the skills and requirements of consecutive interpreting based on Setton and Dawrant (2016). After finishing the course of treatment, participants went through a CI evaluation. They listened attentively to a speech that was delivered with a typical American accent. The speech was broken up into segments so that it could be interpreted in a consecutive mode. The participant's regular interpreting classes took place in the same multimedia lab where the exam was given. The researcher assisted the course instructor in administering the examination. Participants sat with headphones in front of a computer. The instructor provided verbal instructions for the interpreting exam. Participants were needed to take notes as they listened to the speech segment by segment during the examination. At the conclusion of each segment, participants heard a "ding" as a signal to begin interpreting. Each participant's interpretation was recorded individually for further analysis and lasted around 25 minutes.

3.4 Data Analysis

The present study's data comes from two sources: questionnaires and the CI interpreting exam. The participants' responses to the LPT, TAI, SAI, ICAS, and FLCAS questionnaires were entered into SPSS software (version 24) for analysis.

As for the interpreting exam, the recorded CI performance of the participants was transcribed for further assessment. Two raters, both university professors with 8 and 9 years of experience in teaching 'Consecutive Interpreting,' independently scored the CI exam. To ensure impartiality, each rater was unaware of the other's scores, allowing for fair and unbiased evaluations. They used a standardized rubric based on Liu's (2013) guidelines to maintain objectivity and consistency in scoring.

3.4.1 Consecutive Interpreting Exam Rating Method

Based on Liu's (2013) guidelines, the researchers used a segment of several sentences that collectively conveyed a cohesive idea as the unit for scoring the interpreting exam. Moreover, the output of students' consecutive interpreting was evaluated on two levels: accuracy and delivery (Liu, 2013). The accuracy scale

assessed the conveyed message of the CI output, while the delivery scale evaluated the oral presentation of the meaning transfer. The rating units for both scales were composed of several sentences forming a coherent message, with the material selected for this study being divided into eight different rating units. Each student was rated twice, once for accuracy on a scale of 0 to 5, and once for delivery on a scale of 0 to 5. The highest possible score on each scale was 8×5=40 and the minimum score on each scale was 8×0=0, resulting in a maximum CI total score of 80, obtained by combining the accuracy and delivery scores (40+40=80).4.

4. Results

The descriptive statistics of the participants' scores on the instruments used are presented below. Moreover, in line with the research questions of the study, the relationships among the variables of the study are investigated.

Descriptive Statistics of the Variables

The descriptive statistics of the variables are presented in Table 1.

Table 1

Descriptive Statistics

	N	Range	Minimum	Maximum	Mean		Std. Deviation	Variance
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
FLCAS	88	77.00	70.00	147.00	104.3409	2.05355	19.26398	371.101
Interpreting Anxiety	88	76.00	89.00	165.00	121.6591	2.65865	24.94034	622.020
Trait Anxiety	88	38.00	32.00	70.00	42.1136	.99429	9.32730	86.998
State Anxiety	88	29.00	25.00	54.00	37.7045	.88367	8.28953	68.716
Consecutive interpreting exam	88	35.00	34.00	69.00	50.7386	.95804	8.98721	80.770
Valid N (listwise)	88							

Among 88 participants of the present investigation, the minimum score

obtained on FLCAS was 70 and the maximum score was 147 (M = 104.34, SD = 19.26). The minimum score obtained on Interpreting Anxiety was 89 and the maximum score was 165 (M = 121.65, SD = 24.94). The minimum score obtained on Trait Anxiety was 32 and the maximum score was 70 (M = 42.11, SD = 9.32). The minimum score obtained on State Anxiety was 25 and the maximum score was 54 (M = 37.70, SD = 8.24). The minimum score obtained on Consecutive Interpreting exam was 34 and the maximum score was 69 (M = 50.73, SD = 8.98).

Inter-rater Reliability

The reliability analyses for the consecutive interpreting scores by two raters were launched using intraclass correlation coefficient (ICC). A two-way mixed model with the consistency type was used to analyze the data. According to the results a high level of reliability was found in measurements of both raters. The average measure ICC for the pre-test was .986 with a 95% confidence interval from .983 to .997, F (87,87) = 210.892, p <.001 (Table 2).

Table 2

Intraclass Correlation Coefficient for pre-test

		95% Confidence Interval		F Test with True Value 0			
	Intraclass Correlation[b]	Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.981[a]	.975	.995	210.892	87	87	.000
Average Measures	.986[c]	.983	.997	210.892	87	87	.000

Two-way mixed effects model where people effects are random and measures effects are fixed.

a. The estimator is the same, whether the interaction effect is present or not.

b. Type C intraclass correlation coefficients using a consistency definition. The between-measure variance is excluded from the denominator variance.

c. This estimate is computed assuming the interaction effect is absent, because it is not estimable otherwise.

Taken together, the results show a high level of reliability between raters.

Tests of Normality

The assessment of normality of the data was analyzed via Kolmogorov-Smirnov and Shapiro-Wilk estimates (Table 3)

Table 3

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
FLCAS	.130	88	.061	.941	88	.064
INANX	.132	88	.051	.918	88	.051
Trait Anxiety	.159	88	.056	.860	88	.058
State Anxiety	.253	88	.063	.900	88	.063
Consecutive interpreting exam	.159	88	.072	.952	88	.072

a. Lilliefors Significance Correction

The results do not show significant deviations from normality. Therefore, it is safe to conduct parametric analyses in terms of normality assumption.

To investigate the first research question regarding which type of anxiety has the greatest impact on the stress experienced by student interpreters, first to enhance comparability between the scores, they were adjusted to a scale of 5 using normalization. The descriptive statistics are presented in Table 4.

Table 4

Descriptive Statistics of Normalized Score to a Scale of 5

	N	Range	Minimum	Maximum	Mean		Std. Deviation	Variance
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
FLCAS5	88	2.33	2.12	4.45	3.1618	.06223	.58376	.341
INANX5	88	1.73	2.02	3.75	2.8466	.06025	.56524	.319

TRANX5	88	2.10	2.40	4.50	3.3358	.05379	.50457	.255
STANX5	88	2.50	2.25	4.75	3.2636	.06765	.63462	.403
Valid N (listwise)	88							

The results showed that student interpreters experienced high levels of anxiety, with trait anxiety (M = 3.33) being the most significant factor, followed by state anxiety (M = 3.26), foreign language classroom anxiety (M = 3.16), and interpreting anxiety (M = 2.84).

The second research question aimed to explore the relationships between foreign language classroom anxiety, interpreting classroom anxiety, trait anxiety, and state anxiety. To analyze these relationships, a set of Pearson Product-Moment Correlations were conducted (Table 5).

Table 5

Correlations among Anxiety Stressors

		FLCAS	INANX	Trait Anxiety	State Anxiety
FLCAS	Pearson Correlation	1	.679**	.570**	.380**
	Sig. (2-tailed)		.000	.000	.000
	N	88	88	88	88
Interpreting Anxiety	Pearson Correlation	.679**	1	.305**	.401**
	Sig. (2-tailed)	.000		.004	.000
	N	88	88	88	88
Trait Anxiety	Pearson Correlation	.570**	.305**	1	.068
	Sig. (2-tailed)	.000	.004		.528
	N	88	88	88	88
State Anxiety	Pearson Correlation	.380**	.401**	.068	1
	Sig. (2-tailed)	.000	.000	.528	
	N	88	88	88	88

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

According to the results, foreign language classroom anxiety (FLCA) was positively correlated with interpreting anxiety ($r = 0.679$, $p < 0.01$), trait anxiety ($r = 0.570$, $p < 0.01$), and state anxiety ($r = 0.380$, $p < 0.01$). Similarly, interpreting anxiety showed positive correlations with FLCA ($r = 0.679$, $p < 0.01$), state anxiety ($r = 0.401$, $p < 0.01$), and trait anxiety ($r = 0.305$, $p = 0.004$). Additionally, trait anxiety was positively correlated with both FLCA ($r = 0.570$, $p < 0.01$) and interpreting anxiety ($r = 0.305$, $p = 0.004$). State anxiety also exhibited significant positive correlations with FLCA ($r = 0.380$, $p < 0.01$) and interpreting anxiety ($r = 0.401$, $p < 0.01$); however, it did not show a significant correlation with trait anxiety ($r = 0.068$, $p = 0.528$).

The last question examined anxiety stressors as predictors of student interpreters' performance in consecutive interpreting, first the correlation analyses (Table 6) among the variables were analyzed. Second, a linear regression was conducted (Table 7).

Table 6

Correlations among Consecutive Interpreting Exam and Anxiety Stressors

		Consecutive interpreting exam	FLCAS	INANX	Trait Anxiety	State Anxiety
Cnsecutive interpreting exam	Pearson Correlation	1	-.651**	-.620**	-.634**	-.516**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	88	88	88	88	88
FLCAS	Pearson Correlation	-.651**	1	.679**	.570**	.380**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	88	88	88	88	88
INANX	Pearson Correlation	-.620**	.679**	1	.305**	.401**
	Sig. (2-tailed)	.000	.000		.004	.000
	N	88	88	88	88	88

Trait Anxiety	Pearson Correlation	-.634**	.570**	.305**	1	.068
	Sig. (2-tailed)	.000	.000	.004		.528
	N	88	88	88	88	88
State Anxiety	Pearson Correlation	-.516**	.380**	.401**	.068	1
	Sig. (2-tailed)	.000	.000	.000	.528	
	N	88	88	88	88	88

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

The results indicated significant negative correlations between consecutive interpreting exam scores and various types of anxiety. Specifically, there was a strong negative correlation between consecutive interpreting exam scores and foreign language classroom anxiety (FLCA) ($r = -0.651$, $p < 0.01$), suggesting that as FLCA scores increased, consecutive interpreting exam scores tended to decrease. Similarly, a significant negative correlation was found between consecutive interpreting exam scores and trait anxiety ($r = -0.620$, $p < 0.01$), indicating that higher trait anxiety scores were associated with lower consecutive interpreting exam scores. Additionally, state anxiety also exhibited a significant negative correlation with consecutive interpreting exam scores ($r = -0.634$, $p < 0.01$), meaning that as state anxiety scores increased, consecutive interpreting exam scores tended to decrease. Finally, interpreting anxiety showed a significant negative correlation with consecutive interpreting exam scores ($r = -0.516$, $p < 0.01$), further reinforcing the trend that higher levels of interpreting anxiety were linked to lower performance on the exam.

Furthermore, a linear regression analysis was run with the Consecutive Interpreting Exam as the dependent variable and the anxiety stressors as the independent variables (Table 7).

Table 7

Linear Regression with the Predictors of Consecutive Interpreting Exam

Criteria	Predictors			
Consecutive Interpreting Exam	FLCAS	Interpreting Anxiety	Trait Anxiety	State Anxiety
β	-.106	-.316	-.505	-.349

t	-2.01		-3.793	-6.802	-5.229
p	.012		.000	.000	.000
R = .840	R^2 = .706	$R^2_{adjusted}$ = .692	F = 49.919	df = 4	*p* = .000

The regression model shows that all four predictors significantly predict Consecutive Interpreting Exam scores ($p < .05$). The strongest predictor is Trait Anxiety ($\beta = -.505$, $p < .001$), followed by Interpreting Anxiety ($\beta = -.316$, $p < .001$), State Anxiety ($\beta = -.349$, $p < .001$), and FLCA ($\beta = -.106$, $p < .05$). The model explains a high proportion of variance in Consecutive Interpreting Exam scores (R2 = .706), indicating that the four predictors together are strong predictors of the outcome variable.

5. Discussion

The first research question aimed to detect the type of anxiety that had the greatest impact on the stress experienced by student interpreters. The results of the study showed that trait anxiety, which refers to anxiety that is consistent over time and across situations, had the most significant impact on the stress experienced by student interpreters. State anxiety, which refers to anxiety that is specific to a particular situation, and foreign language classroom anxiety, which refers to anxiety related to language learning, also had a significant impact on the stress experienced by student interpreters. Interestingly, interpreting anxiety, which refers to anxiety related specifically to the act of interpreting, had the lowest impact on the stress experienced by student interpreters. This suggests that interpreting students may be experiencing stress from multiple sources simultaneously, which could have a cumulative impact on their overall stress levels.

While there are some differences in the specific order of anxiety types, the findings of this research question are consistent with previous studies. For example, the finding that trait anxiety has the greatest impact on the stress experienced by student interpreters is consistent with the findings of a research conducted by Chiang (2010) that reported trait anxiety as a significant predictor of interpretation anxiety in student interpreters.

Furthermore, the present study showed the significant impact of state anxiety on the stress experienced by student interpreters, indicating that certain features of a given situation may be perceived as stressors. This is consistent with previous research, including Skolastika's (2017) study, which identified factors such as making mistakes, lack of preparation, and time pressure as sources of state anxiety for student interpreters.

Foreign language classroom anxiety (FLCA) was the third source of stress for student interpreters which is consistent with several studies in the literature (Dewaele & MacIntyre, 2014; Horwitz, 1986). Moreover, it seems logical to claim that interpreting classes have a dual anxiety-provoking nature. Specifically, these classes not only involve learning a foreign language but also require students to engage in a highly demanding real-time task, which can be stressful for many learners. The combination of these two factors can increase the level of anxiety experienced by students. The present study interestingly found that the level of FLCA experienced by students was higher than the level of interpreting classroom anxiety. This suggests that the foreign language classroom aspect of interpreting classes may be a more significant source of stress for students than the interpreting task itself.

The finding that interpreting anxiety had the lowest impact on the stress experienced by students contrasts with the study conducted by Abed and Elewi (2011), which reported that interpreting anxiety is a more significant source of anxiety for translation students than anxiety experienced in foreign language classrooms. However, our finding may be explained by the fact that interpreting anxiety is likely to be influenced by other types of anxiety, such as trait, state and foreign language classroom anxiety, which were found to have a greater impact on stress. It is also possible that other factors will have helped students to reduce their interpreting anxiety. For example, the participants may have had a greater level of familiarity and comfort with consecutive interpreting, which could have helped to reduce their anxiety. Additionally, the participants may have been more focused on the other sources of anxiety measured, such as state, trait and foreign language classroom anxiety, which may have been more salient and pressing for them.

The second research question investigated the relationship among foreign language classroom anxiety, interpreting classroom anxiety, trait and state anxiety. The results showed significant positive correlations between these variables.

A) Specifically, foreign language classroom anxiety (FLCA) is positively correlated with interpreting anxiety, trait and state anxiety. This finding is consistent with previous research on anxiety in language learning and interpreting contexts. For example, studies have shown that FLCA can negatively affect language learning outcomes and is often linked to general anxiety traits (Dewaele & MacIntyre, 2016; Horwitz, 1986; MacIntyre & Gardner, 1989). Similarly, Chiang (2010) found that trait anxiety is a significant predictor of interpretation anxiety in student interpreters. Additionally, research on stress and anxiety in the workplace has highlighted the importance of trait and state anxiety as predictors of workplace stress (Alpert & Haber, 1960; Cattell & Scheier, 1960).

B) Interpreting anxiety is positively correlated with FLCA, state anxiety, and trait anxiety. These studies suggest that interpreting anxiety is influenced by both general anxiety levels (trait anxiety) and anxiety specific to language learning (FLCA) and the interpreting situation (state anxiety). This is supported by related studies in the literature. For example, Gile (2009) found that interpreting anxiety can be influenced by various factors such as the difficulty of the interpreting task, the audience, and the interpreter's self-confidence. Similarly, research on anxiety in language learning has shown that FLCA can negatively affect language learning outcomes (Dewaele & MacIntyre, 2016; Horwitz, 1986; MacIntyre & Gardner, 1989). Moreover, related studies have also highlighted the importance of trait and state anxiety in predicting interpreting anxiety. For instance, Chiang (2010) found that trait anxiety is a significant predictor of interpretation anxiety in student interpreters.

C) Trait anxiety is positively correlated with FLCA and interpreting anxiety. This is consistent with previous research that has found a link between trait anxiety and anxiety related to language learning and interpreting. The positive correlation suggests that individuals with high levels of trait anxiety may be more likely to experience anxiety in foreign language classrooms and while interpreting. In other words, individuals who experience high levels of trait anxiety may also be more likely to experience anxiety in specific language-related situations, such as language learning or interpreting (Horwitz, 1986; MacIntyre & Gardner, 1989).

D) Lastly, state anxiety is significantly positively correlated with FLCA and interpreting anxiety, but not with trait anxiety. This finding is consistent with previous research in the field. For instance, a study conducted by Horwitz (1986) revealed that foreign language anxiety is composed of three main components: communication apprehension, fear of negative evaluation, and test anxiety. Communication apprehension is similar to interpreting anxiety, as it involves anxiety related to speaking or interpreting in another language. Fear of negative evaluation is similar to trait anxiety, as it involves anxiety related to negative feedback or criticism. Test anxiety is similar to state anxiety, as it involves anxiety related to a specific situation or task. This suggests that state anxiety is more closely related to test anxiety and interpreting anxiety, while trait anxiety is more closely related to fear of negative evaluation and foreign language classroom anxiety. Another study by MacIntyre and Gardner (1989) showed that foreign language anxiety is related to both trait and state anxiety, but that trait anxiety is a stronger predictor of language anxiety than state anxiety. This is consistent with the finding that trait anxiety has a greater impact on the stress experienced by student interpreters than state anxiety.

The third research question intended to identify the types of anxiety that were the strongest predictors of interpreting performance. The findings indicate that all

four predictors (trait anxiety, interpreting anxiety, state anxiety, and FLCA) have a significant impact on consecutive interpreting exam scores. The regression model shows that as scores on each of these predictors increase, consecutive interpreting exam scores tend to decrease.

The strongest predictor of consecutive interpreting exam scores was trait anxiety suggesting that trait anxiety has the most significant impact on the performance of consecutive interpreting tasks. This finding contrasts with the study conducted by Chiang (2010) that suggests a negative but non-significant relationship between participants' trait anxiety and their interpreting scores. It is worth mentioning that both studies used the same instrument to measure trait anxiety. Chiang (2010) used students' midterm and semester grades to induce interpreting output, but no further explanation was provided about the manner of scoring. Therefore, it is possible that differences in the measures used to examine interpreting outcomes could account for the discrepancy between the results. For example, the two studies may have used different types of interpreting tasks or different scoring criteria for interpreting performance. Additionally, differences in sample characteristics could also contribute to the different findings. For instance, the participants in the two studies may have differed in their levels of interpreting experience or their language proficiency, which could affect the relationship between trait anxiety and interpreting performance.

The next strongest predictor was interpreting anxiety, indicating that anxiety specifically related to interpreting also has a significant negative impact on consecutive interpreting exam scores. This finding is compatible with Rajabi and Youefi's (2022) study, which showed that interpreting anxiety, had a negative effect on students interpreting output in terms of both delivery and accuracy. The results of the current research align with those of Skolastika's (2017) study, which found a negative correlation between interpreting anxiety and students' interpreting performance, especially when delivering interpreting. Furthermore, Skolastika's (2017) study identified factors such as lack of confidence, fear of making mistakes, and time pressure that contributed to students' anxiety and negatively influenced their interpreting competencies.

State anxiety was also found to be a significant predictor of consecutive interpreting exam scores. This suggests that anxiety experienced in the moment of the task has a negative impact on performance and is in line with Rojo Lopes et al. (2021). They intended to investigate the potential use of speech rhythm and heart rate as objective measures of stress in interpreting students. The results of the study showed that both speech rhythm and heart rate can be used as indicators of stress in interpreting students. The researchers found that when the students were under stress, their speech rhythm became more irregular and their heart rate increased significantly. Their findings also suggest a significant negative correlation between students' interpreting scores and their level of state anxiety.

Finally, FLCA was found to be a weak but still significant predictor of consecutive interpreting exam scores, meaning that anxiety related to foreign language communication does have a small negative impact on interpreting performance. Several studies in the literature are in line with this result. For example, Chiang (2010) reported a significant negative association between FLCA and students' interpreting outcomes. These findings suggest that foreign language anxiety is a critical factor to consider when training interpreters and developing strategies to improve their performance. Research has shown that foreign language classroom anxiety is a common experience among language learners, and this can lead to anxiety in language learning situations. This anxiety can then result in other types of anxiety, such as interpreting anxiety, trait anxiety, and state anxiety (Horwitz, 1986; MacIntyre & Gardner, 1994; Young, 1991).

6. Conclusions and Implications

Interpreting trainees and trainers need to be aware that learner's factors such as anxiety could negatively impact their interpreting outcome. Hence, learning interpreting skills alone could not guarantee successful achievement in consecutive interpreting classes. In other words, it highlights the importance of addressing anxiety in interpreter training programs to improve performance and ensure quality interpreting services. In summary, the study emphasizes the need for interpreting educators, trainers, and researchers to prioritize managing anxiety as a way of improving interpreting performance. Moreover, the study suggests that addressing trait anxiety may be more effective in reducing overall stress levels for student interpreters.

The current study, like the vast majority of others, suffers from significant (de)limitations that are worth addressing. Due to the limited sample size and non-probability sampling, generalizations of the study's conclusions should be made with caution. In addition, the research is delimited to the investigation of different stressors in consecutive interpreting, but other modes of interpreting may also be explored. Moreover, the study made no mention of stress management or anxiety coping measures intentionally. The present study could be a starting point for conducting further studies in IS in the pedagogical environment of Iran.

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