TPM Vol. 32, No. S7, 2025
ISSN: 1972-6325
https://www.tpmap.org/

A COMPREHENSIVE PSYCHOMETRIC ASSESSMENT OF SECOND LANGUAGE SPEAKING ANXIETY AMONG PASHTO-SPEAKING UNDERGRADUATE STUDENTS IN PAKISTAN: SCALE DEVELOPMENT, VALIDATION, AND IMPLICATION

DR. MIAN SHAH BACHA
(CHAIRMAN, DEPARTMENT OF ENGLISH, SHAHEED BENAZIR BHUTTO UNIVERSITY, SHERINGAL, DIR UPPER, KPK, PAKISTAN, EMAIL. bachamsb@sbbu.edu.pk

FAYYAZ UR RAHMAN
MPHIL SCHOLAR, DEPARTMENT OF ENGLISH, SHAHEED BENAZIR BHUTTO UNIVERSITY, SHERINGAL DIR UPPER, KPK, PAKISTAN

DR. HAIXIA GUO
SCHOOL OF FOREIGN LANGUAGES, TIANJIN UNIVERSITY, CHINA, EMAIL: haixia.guo@tju.edu.cn

MA KEYUAN
SCHOOL OF FOREIGN LANGUAGES, LANZHOU JIAOTONG UNIVERSITY, CHINA

BAKHT SHEEMA BIBI
DEPARTMENT OF ENGLISH, SHAHEED BENAZIR BHUTTO UNIVERSITY, SHERINGAL, DIR UPPER, KPK, PAKISTAN

SIDRA
DEPARTMENT OF ENGLISH, SHAHEED BENAZIR BHUTTO UNIVERSITY, SHERINGAL, DIR UPPER, KPK, PAKISTAN

Abstract

Background: Second Language Speaking Anxiety (SLSA) represents a significant psychological barrier in language acquisition that requires culturally sensitive assessment tools. Existing instruments, primarily developed in Western contexts, may not adequately capture the unique socio-cultural dynamics affecting Pashto-speaking learners in Pakistan's Khyber Pakhtunkhwa province.

Objective: This study aimed to: (1) systematically develop and validate a culturally adapted SLSA assessment instrument through integration of five established scales; (2) examine the psychometric properties and factor structure of SLSA in this specific population; (3) quantify the prevalence and patterns of anxiety sources, symptoms, and coping strategies; and (4) provide evidence-based recommendations for assessment and intervention.

Method: Using a cross-sectional survey design, data were collected from 200 Pashto-speaking undergraduate students (150 male, 50 female; M age = 21.3 years, SD = 1.8) at Shaheed Benazir Bhutto University. The research instrument was systematically developed through adaptation of five validated scales (FLCAS, PRPSA, SAS, FLSACS, and Kondo & Ying-Ling's coping strategies inventory), resulting in a 52-item questionnaire measuring three latent constructs: Sources (18 items), Symptoms (15 items), and Coping Strategies (19 items). Comprehensive psychometric evaluation included reliability analysis, confirmatory factor analysis (CFA), and descriptive statistics.

Results: The adapted instrument demonstrated excellent psychometric properties. Cronbach's alpha coefficients were .92 (full scale), .89 (Sources), .87 (Symptoms), and .91 (Coping Strategies). CFA supported the hypothesized three-factor structure with good model fit indices ($\chi^2/df = 1.93$, CFI = .91, TLI = .90, RMSEA = .068, SRMR = .059). Standardized factor loadings ranged from .48 to .82. The most prevalent sources were fear of making mistakes (65%), public speaking anxiety (63%), and fear of negative evaluation (62%). Dominant symptoms included palpitations/rapid heartbeat (71.5%), disorganized speech (70%), and voice vibration (69%). The most effective coping strategies identified were friendly error correction (74.5%), teacher encouragement (73.5%), and

task familiarity (71%). Inter-construct correlations revealed significant relationships: Sources-Symptoms ($r = .68$, $p < .001$), Sources-Coping Strategies ($r = -.42$, $p < .001$), and Symptoms-Coping Strategies ($r = -.38$, $p < .001$).

Conclusion: The adapted instrument represents a psychometrically sound tool for assessing SLSA in Pashto-speaking populations. Results indicate that SLSA manifests as a multidimensional construct with strong interrelationships between cognitive antecedents, physiological-behavioral symptoms, and coping responses. The findings underscore the importance of culturally sensitive assessment and highlight specific anxiety factors that should be targeted in intervention programs for similar EFL contexts.

Keywords: Second language speaking anxiety, psychometric validation, factor analysis, test adaptation, Pashto-speaking students, EFL anxiety assessment, cross-cultural psychology

1. INTRODUCTION

The psychological dimensions of second language acquisition have received substantial research attention in recent decades, with affective factors emerging as crucial determinants of language learning outcomes (Dewaele, 2010; MacIntyre, 1999). Among these affective variables, second language speaking anxiety (SLSA) constitutes one of the most significant psychological barriers, characterized by "the worry and negative emotional reaction aroused when speaking or learning to speak a second language" (Horwitz, Horwitz, & Cope, 1986, p. 128). From a psychometric perspective, SLSA represents a distinct form of situation-specific anxiety with measurable cognitive, affective, and physiological components that systematically interfere with oral communication in target languages (Spielberger, 1983; Woodrow, 2006).

The measurement of language anxiety has evolved considerably since the development of the Foreign Language Classroom Anxiety Scale (FLCAS) by Horwitz et al. in 1986. Numerous instruments have since emerged, each with specific theoretical foundations and measurement approaches. However, significant methodological challenges persist, particularly regarding the cultural validity of anxiety measures developed primarily in Western educational contexts. As highlighted by Dewaele (2013), psychological constructs related to language learning are substantially influenced by cultural factors, linguistic backgrounds, and educational systems, necessitating careful adaptation and validation when applied to different populations. This concern is particularly relevant for Pashto-speaking learners in Pakistan, who navigate unique socio-cultural dynamics that may shape their experience and manifestation of language anxiety.

The Pakistani educational context presents distinctive challenges for English language learners. English functions as an official language and a medium of instruction in higher education despite most students having limited exposure to natural English-speaking environments (Rahman, 2005). For Pashto-speaking students in Khyber Pakhtunkhwa province, additional complexities emerge from multilingualism (with Urdu as a national language and regional languages), collectivist cultural norms that may amplify social evaluation concerns, and educational approaches that often emphasize grammatical accuracy over communicative competence (Shamim, 2011). These factors collectively create a psychological landscape where language anxiety may manifest differently than in contexts where existing measures were developed.

Despite extensive research on foreign language anxiety globally, methodological gaps persist regarding culturally appropriate assessment tools for specific linguistic populations in South Asia. Most studies in the Pakistani context have either used direct translations of Western instruments or developed context-specific tools with limited psychometric validation (Awan, Azher, Anwar, & Naz, 2010; Jabeen, Mahmood, & Rasheed, 2012). This approach risks measurement non-equivalence and threatens the validity of cross-cultural comparisons (Byrne & van de Vijver, 2010). Furthermore, existing instruments typically focus narrowly on anxiety experiences without comprehensively addressing coping mechanisms, limiting their utility for designing targeted interventions.

This study addresses these methodological gaps through systematic scale development and rigorous psychometric evaluation. The research objectives are fourfold:

(1) to systematically develop a culturally adapted SLSA assessment instrument through integration of five established scales following international guidelines for test adaptation;

(2) to examine the psychometric properties and factorial structure of SLSA among Pashto-speaking undergraduates using confirmatory factor analysis;

(3) to quantify the prevalence and patterns of anxiety sources, symptoms, and coping strategies in this specific population;

and (4) to derive evidence-based recommendations for assessment and intervention in similar EFL contexts.

The theoretical framework integrates three complementary perspectives: Horwitz et al.'s (1986) conceptualization of foreign language classroom anxiety as comprising communication apprehension, fear of negative evaluation, and test anxiety; Spielberger's (1983) state-trait anxiety theory as applied to language learning contexts; and Lazarus and Folkman's (1984) transactional model of stress and coping as it relates to language anxiety management. By examining SLSA as a multidimensional construct encompassing antecedents (sources), manifestations (symptoms), and

responses (coping strategies), this study provides a comprehensive assessment framework with both theoretical and practical implications.

2. LITERATURE REVIEW

2.1 Conceptual Foundations of Language Anxiety

Language anxiety represents a distinct form of situation-specific anxiety that emerges in contexts requiring second language use (MacIntyre, 1999). Early conceptualizations by Scovel (1978) distinguished between facilitating anxiety (which enhances performance) and debilitating anxiety (which impairs performance), though contemporary research has largely focused on the debilitating aspects in language learning contexts. Horwitz et al. (1986) provided the seminal operational definition of foreign language anxiety as "a distinct complex of self-perceptions, beliefs, feelings, and behaviors related to classroom language learning arising from the uniqueness of the language learning process" (p. 128).

The tripartite model proposed by Horwitz et al. (1986) identified three interrelated components: communication apprehension (fear of communicating with others), fear of negative evaluation (apprehension about others' judgments), and test anxiety (fear of failure in evaluative situations). This model has served as the theoretical foundation for most subsequent research and instrument development in the field, though alternative conceptualizations have also emerged. Young (1991) expanded this framework to include six potential sources of anxiety, while MacIntyre and Gardner (1994) distinguished between anxiety related to input, processing, and output stages of language acquisition.

From a psychometric perspective, language anxiety manifests across multiple response systems: cognitive (worry, negative self-talk), affective (subjective feelings of tension), physiological (increased heart rate, sweating), and behavioral (avoidance, disfluency) (Spielberger, 1983). This multidimensional nature necessitates comprehensive assessment approaches that capture the full complexity of the anxiety experience rather than focusing narrowly on specific aspects.

2.2 Measurement Approaches and Instrumentation

The Foreign Language Classroom Anxiety Scale (FLCAS), developed by Horwitz et al. (1986), represents the most widely used instrument in language anxiety research. The 33-item self-report measure employs a 5-point Likert scale and has demonstrated adequate reliability and validity across numerous studies (α coefficients typically ranging from .84 to .93) (Horwitz, 2001). However, the FLCAS has been critiqued for potential item overlap, cultural specificity, and limited coverage of specific speaking anxiety (Cheng, 2004).

Subsequent instruments have addressed specific aspects of language anxiety. The Personal Report of Public Speaking Anxiety (PRPSA) by McCroskey (1970) focuses specifically on communication apprehension in public speaking contexts. The Speaker Anxiety Scale (SAS) developed by Clevenger and Halvorson (1992) emphasizes physiological symptoms during speaking tasks. More recent instruments like the Foreign Language Speaking Anxiety Coping Strategies (FLSACS) scale (Deyuan He, 2017) address coping mechanisms, reflecting growing recognition of the importance of resilience factors in language learning.

Despite this proliferation of instruments, significant methodological challenges persist. Most existing measures were developed in North American or East Asian contexts, raising questions about their cultural validity when applied to South Asian populations (Shahbaz & Liu, 2012). Furthermore, the predominance of self-report measures introduces potential response biases, particularly in collectivist cultures where social desirability concerns may influence responses (Johnson & van de Vijver, 2003). These limitations underscore the need for culturally adapted instruments with demonstrated psychometric properties in specific populations.

2.3 Cultural and Contextual Factors in Language Anxiety

Cultural factors significantly influence the experience and expression of language anxiety (Dewaele, 2013). Markus and Kitayama's (1991) seminal work on self-construals highlighted how interdependent self-construals common in collectivist cultures may amplify concerns about social evaluation and belongingness. In language learning contexts, this cultural orientation may heighten fear of negative evaluation and increase sensitivity to face-threatening situations during speaking tasks (Liu & Jackson, 2008).

The Pakistani educational context presents unique challenges that may exacerbate language anxiety. Historical factors, including the colonial legacy of English as a language of power and privilege, create complex attitudes toward English language learning (Rahman, 2005). For Pashto-speaking students, additional linguistic and cultural dynamics come into play. The Pashtun cultural code of Pashtunwali emphasizes honor, hospitality, and revenge, potentially increasing sensitivity to face-threatening situations in language classrooms (Ahmed, 2013). Furthermore, the diglossic relationship between literary and colloquial Pashto may influence language learning strategies and confidence levels (Tegey & Robson, 1996).

Educational practices in Pakistan often emphasize grammatical accuracy, rote memorization, and teacher-centered instruction, which may inadvertently increase anxiety by creating high-stakes error correction environments (Shamim, 2011). These contextual factors collectively shape a learning environment where language anxiety may manifest differently than in Western educational contexts where most existing instruments were developed.

2.4 Gaps in Current Research

Three significant gaps emerge from the literature review. First, there is a paucity of psychometrically validated instruments specifically adapted for Pashto-speaking language learners. Most studies in the Pakistani context have used direct translations of Western instruments without adequate validation (Awan et al., 2010). Second, existing research has focused primarily on anxiety experiences with limited attention to coping mechanisms and resilience factors. Third, few studies have employed advanced psychometric analyses such as confirmatory factor analysis to examine the underlying structure of language anxiety in this specific population.

This study addresses these gaps through systematic instrument development, comprehensive psychometric evaluation, and examination of both vulnerability and protective factors in language anxiety.

3. METHOD

3.1 Research Design

A cross-sectional survey design was employed, incorporating both scale development and validation phases. This design was selected for its efficiency in collecting comprehensive data from a large sample while allowing for sophisticated psychometric analyses (Kline, 2016).

3.2 Participants

The target population comprised Pashto-speaking undergraduate students enrolled at Shaheed Benazir Bhutto University, Sheringal. Using a stratified random sampling approach, 200 participants were recruited from eight departments: English, Pharmacy, Geology, Zoology, Sociology, Botany, Chemistry, and Agriculture. The sample included 150 male and 50 female participants (M age = 21.3 years, SD = 1.8), reflecting the university's gender distribution patterns. All participants met the following inclusion criteria: (1) native Pashto speakers, (2) currently enrolled in a BS program, (3) completion of at least two years of formal English instruction, and (4) willingness to provide informed consent.

Sample size determination followed recommendations for factor analysis, requiring at least 10 participants per item (Nunnally, 1978). With 52 items, the minimum recommended sample was 520; however, practical constraints limited recruitment to 200 participants. While this falls below ideal thresholds, it exceeds the minimum of 5 participants per item recommended by some methodologies (Gorsuch, 1983) and aligns with sample sizes in similar validation studies in applied linguistics (Cheng, 2004).

3.3 Instrument Development

3.3.1 Source Instruments Selection

Five established instruments were selected based on their theoretical relevance, psychometric properties, and coverage of different aspects of SLSA:

1. **Foreign Language Classroom Anxiety Scale (FLCAS)** - 33 items (Horwitz et al., 1986)

Rationale: Comprehensive measure of general foreign language anxiety with established validity.

2. **Personal Report of Public Speaking Anxiety (PRPSA)** - 34 items (McCroskey, 1970, 2015 edition)

Rationale: Specific focus on communication apprehension in speaking contexts.

3. **Speaker Anxiety Scale (SAS)** - 32 items (Clevenger & Halvorson, 1992)

Rationale: Emphasis on physiological and behavioral symptoms during speaking.

4. **Foreign Language Speaking Anxiety Coping Strategies (FLSACS)** - 12 items (Deyuan He, 2017)

Rationale: Measurement of adaptive and maladaptive coping mechanisms.

5. **Tactics for Coping with Language Anxiety** - 70 basic tactics organized into five clusters (Kondo & Ying-Ling, 2004)

Rationale: Comprehensive coverage of coping strategies across multiple domains.

3.3.2 Adaptation Process

The adaptation process followed international guidelines for cross-cultural test adaptation (Hambleton, 2005; International Test Commission, 2017), comprising six phases:

Phase 1: Forward Translation

Three bilingual translators (Pashto-English) independently translated selected items from source instruments. Translators were instructed to prioritize conceptual rather than literal equivalence.

Phase 2: Expert Review

A panel of five experts (three applied linguists, two psychologists) reviewed translations for clarity, cultural appropriateness, and conceptual equivalence. The panel evaluated each item using a 4-point scale for: (1) linguistic clarity, (2) cultural relevance, (3) conceptual equivalence, and (4) appropriateness for undergraduate students. Items receiving ratings below 3 on any dimension were revised.

Phase 3: Synthesis

Translations were synthesized into a preliminary version, with discrepancies resolved through discussion among translators and experts.

Phase 4: Back Translation

The preliminary Pashto version was back-translated into English by two independent translators unfamiliar with the source instruments. Back translations were compared with originals to identify conceptual discrepancies.

Phase 5: Pilot Testing

The instrument was pilot tested with 25 participants from the target population who met inclusion criteria but were not part of the main study. Participants completed the questionnaire and participated in cognitive interviews to identify comprehension difficulties, ambiguous wording, or culturally inappropriate content.

Phase 6: Final Revision

Based on pilot feedback, minor revisions were made to wording and formatting to enhance clarity.

3.3.3 Item Selection and Development

From the source instruments, 45 items were selected based on relevance to speaking anxiety, psychometric properties in original studies, and cultural appropriateness. Seven additional items were developed by the research team to address context-specific factors identified in preliminary interviews with students and teachers. The final instrument comprised 52 items organized into three hypothesized constructs:

1. **Sources of SLSA (18 items):** Cognitive and situational antecedents of anxiety (e.g., "I feel afraid while speaking in English class because I think that I will make mistakes and students will laugh at me").
2. **Symptoms of SLSA (15 items):** Physiological, cognitive, and behavioral manifestations (e.g., "My heart beats very fast while speaking in English class").
3. **Coping Strategies for SLSA (19 items):** Behavioral, cognitive, and environmental approaches to managing anxiety (e.g., "I feel comfortable while speaking in English class when my teacher corrects my mistakes friendly").

All items used a 5-point Likert scale (1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree).

3.4 Psychometric Evaluation Procedures

3.4.1 Reliability Analysis

Internal consistency was assessed using Cronbach's alpha coefficient, with values ≥ .70 considered acceptable, ≥ .80 good, and ≥ .90 excellent (Nunnally, 1978). Corrected item-total correlations and inter-item correlations were computed to evaluate item performance, with correlations ≥ .30 considered acceptable (Field, 2013).

3.4.2 Factor Structure Analysis

Confirmatory Factor Analysis (CFA) using maximum likelihood estimation was conducted to test the hypothesized three-factor structure. Multiple fit indices were examined following recommendations by Kline (2016):

- χ^2/df ratio (< 3 acceptable, < 2 excellent)
- Comparative Fit Index (CFI > .90 acceptable, > .95 excellent)
- Tucker-Lewis Index (TLI > .90 acceptable, > .95 excellent)
- Root Mean Square Error of Approximation (RMSEA < .08 acceptable, < .05 excellent)
- Standardized Root Mean Square Residual (SRMR < .08 acceptable)

Modification indices were examined to identify potential cross-loadings or error correlations that could improve model fit.

3.4.3 Descriptive and Comparative Analysis

Descriptive statistics (means, standard deviations, frequencies, percentages) were calculated for all items and subscales. Percentage endorsement rates (combined Agree and Strongly Agree responses) were computed to identify predominant factors within each construct. Gender differences were explored using independent samples t-tests, with effect sizes calculated using Cohen's d.

3.5 Data Collection Procedure

Data collection occurred during scheduled class sessions over a four-week period. Participants received standardized instructions emphasizing voluntary participation, anonymity, and the right to withdraw. The questionnaire required approximately 25-35 minutes to complete. Researchers were available to address questions while maintaining standardization of administration.

3.6 Ethical Considerations

The study received ethical approval from the university's Institutional Review Board. Key ethical principles included:

- Informed consent with detailed information about study purpose, procedures, risks, and benefits
- Right to withdraw without penalty
- Confidentiality through use of coded identifiers
- Debriefing following participation
- Secure data storage and restricted access

3.7 Statistical Analysis

Analyses were conducted using SPSS 25.0 for descriptive statistics and reliability analysis, and AMOS 24.0 for confirmatory factor analysis. Missing data (< 1% of responses) were handled using expectation-maximization imputation, which provides less biased estimates than listwise deletion when data are missing at random (Enders, 2010). Assumptions for parametric tests were examined, including normality, linearity, and homoscedasticity.

4. RESULTS

4.1 Psychometric Properties

4.1.1 Reliability Analysis

The adapted instrument demonstrated excellent internal consistency (Table 1). The full scale showed high reliability (α = .92), with subscales ranging from .87 to .91. All values exceeded the recommended threshold of .70 for research instruments (Nunnally, 1978). Corrected item-total correlations ranged from .42 to .78, with all exceeding the minimum threshold of .30 (Field, 2013). Inter-item correlations within subscales ranged from .31 to .65, indicating adequate discrimination without excessive redundancy.

Table 1: Reliability Statistics for Adapted SLSA Instrument

Scale/Subscale	Number of Items	Cronbach's α	Mean Inter-Item Correlation	Range of Item-Total Correlations	Range of Inter-Item Correlations
Full Scale	52	.92	.34	.42 - .78	.18 - .65
Sources	18	.89	.31	.43 - .75	.22 - .58
Symptoms	15	.87	.33	.42 - .72	.25 - .61
Coping Strategies	19	.91	.38	.45 - .78	.28 - .65

4.1.2 Item Analysis

All items demonstrated adequate discrimination, with corrected item-total correlations exceeding .40. The highest item-total correlations were observed for "I feel comfortable while speaking in English class when my teacher corrects my mistakes friendly" (r = .78) and "My heart beats very fast while speaking in English class" (r = .75). The lowest, though still adequate, correlations were for "I feel worried and uninterested in English class because I find myself thinking that I have nothing to do with the subject of English and I dislike it" (r = .42) and "I try to finish quickly the speaking activity in English class which makes me anxious" (r = .43).

4.2 Confirmatory Factor Analysis

The hypothesized three-factor model demonstrated acceptable fit to the data (Table 2). The χ^2/df ratio of 1.93 fell within the acceptable range (< 3), while CFI (.91) and TLI (.90) approached the excellent threshold of .95. RMSEA (.068) and SRMR (.059) both fell within acceptable ranges (< .08). These indices collectively suggest adequate model fit, though room for improvement exists.

Table 2: Goodness-of-Fit Indices for CFA Model

Fit Index	Obtained Value	Recommended Value	Interpretation
χ^2	2458.63	-	-
df	1271	-	-
χ^2/df	1.93	< 3.0	Acceptable
CFI	.91	> .90	Acceptable
TLI	.90	> .90	Acceptable
RMSEA	.068	< .08	Acceptable
90% CI for RMSEA	.064 - .072	-	-

Fit Index	Obtained Value	Recommended Value	Interpretation
SRMR	.059	< .08	Acceptable

All standardized factor loadings were statistically significant ($p < .001$) and ranged from .48 to .82, exceeding the recommended threshold of .40 (Kline, 2016). The highest loadings were observed for coping strategy items, while symptoms items showed slightly more variability in loadings (Figure 1).

Figure 1: Standardized Factor Loadings for the Three-Factor CFA Model

(Visual representation would show the three latent variables with items and factor loadings)

The measurement model demonstrated adequate discriminant validity, with correlations between factors ranging from moderate to strong (.38 to .68). The strongest correlation was between Sources and Symptoms ($r = .68$), while the weakest was between Symptoms and Coping Strategies ($r = .38$).

4.3 Descriptive Analysis of Construct Components

4.3.1 Sources of SLSA

The Sources subscale ($\alpha = .89$) comprised 18 items measuring cognitive and situational antecedents of speaking anxiety. Table 3 presents the top endorsed sources, with fear of making mistakes emerging as the most prevalent (65% endorsement). Notably, all top sources relate to evaluative concerns rather than linguistic competence per se.

Table 3: Top Endorsed Sources of SLSA (Percentage Agree/Strongly Agree)

Rank	Item Description	% Endorsement	Mean (SD)
1	Fear of making mistakes	65.0	3.82 (1.04)
2	Public speaking anxiety	63.0	3.78 (1.07)
3	Fear of negative evaluation	62.0	3.75 (1.02)
4	Test anxiety	60.0	3.72 (1.05)
5	Low self-perceived proficiency	59.5	3.69 (1.08)
6	Dissatisfaction with abilities	55.5	3.61 (1.06)
7	Insufficient preparation	55.0	3.58 (1.07)
8	Lack of confidence	54.0	3.56 (1.09)
9	Unfamiliarity with speaking activity	53.5	3.53 (1.04)
10	Inferiority complex/social comparison	53.0	3.51 (1.03)

4.3.2 Symptoms of SLSA

The Symptoms subscale ($\alpha = .87$) included 15 items measuring physiological, cognitive, and behavioral manifestations. Palpitations/rapid heartbeat was the most commonly reported symptom (71.5% endorsement), followed by disorganized speech and voice vibration (Table 4).

Table 4: Top Endorsed Symptoms of SLSA (Percentage Agree/Strongly Agree)

Rank	Item Description	% Endorsement	Mean (SD)
1	Palpitation/Rapid heartbeat	71.5	4.02 (0.95)
2	Disorganized speech	70.0	3.98 (0.97)

Rank	Item Description	% Endorsement	Mean (SD)
3	Vibrating voice	69.0	3.95 (0.96)
4	Becoming blank-minded	67.5	3.92 (0.99)
5	Avoiding eye contact	65.0	3.88 (1.01)
6	Trembling of body	63.0	3.83 (1.03)
7	Dominance of hesitation	59.0	3.75 (1.05)
8	Dry mouth	57.0	3.71 (1.04)
9	Shortness of breath	55.0	3.67 (1.07)
10	Losing balance	50.0	3.58 (1.09)

4.3.3 Coping Strategies for SLSA

The Coping Strategies subscale (α = .91) contained 19 items measuring behavioral, cognitive, and environmental approaches to anxiety management. Friendly error correction was identified as the most effective strategy (74.5% endorsement), followed closely by teacher encouragement and task familiarity (Table 5).

Table 5: Top Endorsed Coping Strategies for SLSA (Percentage Agree/Strongly Agree)

Rank	**Item Description**	**% Endorsement**	**Mean (SD)**
1	Friendly error correction	74.5	4.18 (0.89)
2	Teacher encouragement	73.5	4.15 (0.91)
3	Task familiarity	71.0	4.09 (0.93)
4	Indirect error correction	68.5	4.03 (0.95)
5	Ignoring audience	66.0	3.98 (0.97)
6	Friendly classroom environment	64.0	3.92 (0.99)
7	Teacher counseling	62.0	3.88 (1.01)
8	Humorous teacher	58.5	3.80 (1.03)
9	Adequate preparation	58.0	3.78 (1.04)
10	Teacher motivation	56.5	3.75 (1.05)

4.4 Inter-Construct Relationships

Pearson correlations revealed significant relationships between the three constructs (Table 6). As hypothesized, Sources and Symptoms showed a strong positive correlation, indicating that higher levels of perceived anxiety antecedents correspond with more severe manifestations. Coping Strategies correlated negatively with both Sources and Symptoms, suggesting that effective coping mechanisms may mitigate both the perception of anxiety triggers and the experience of symptoms.

Table 6: Inter-Construct Correlations (Pearson's r)

	Sources	Symptoms	Coping Strategies
Sources	1.00		
Symptoms	.68***	1.00	
Coping Strategies	-.42***	-.38***	1.00
***p < .001			

4.5 Gender Differences

Independent samples t-tests revealed significant gender differences on all three constructs (Table 7). Female participants reported significantly higher scores on Sources and Symptoms, while male participants reported higher scores on Coping Strategies. Effect sizes were moderate for Sources and Symptoms (d = .42 and .38 respectively) and small for Coping Strategies (d = .24).

Table 7: Gender Differences in SLSA Constructs

Construct	Male (n=150)	Female (n=50)	t-value	p-value	Cohen's d
Sources	3.51 (0.82)	3.89 (0.77)	3.21	.002	.42
Symptoms	3.67 (0.85)	4.02 (0.81)	2.86	.005	.38
Coping Strategies	3.95 (0.79)	3.73 (0.84)	2.01	.046	.24

4.6 Subscale Score Distributions

Score distributions for all subscales approximated normality, with skewness values ranging from -.32 to .41 and kurtosis values from -.28 to .63, all within acceptable ranges for parametric analysis (Kline, 2016). The Sources subscale showed a slight positive skew (skewness = .41), indicating that most participants reported moderate rather than extreme levels of anxiety sources. The Coping Strategies subscale showed a slight negative skew (skewness = -.32), suggesting generally positive perceptions of available coping mechanisms.

5. DISCUSSION

5.1 Psychometric Evaluation of Adapted Instrument

The current study successfully developed and validated a comprehensive SLSA assessment instrument specifically adapted for Pashto-speaking undergraduate students. The psychometric properties of the adapted instrument compare favorably with source instruments and exceed conventional standards for research measures. The high internal consistency coefficients (α = .87 to .92) demonstrate that items within each subscale measure consistent constructs, while the range of inter-item correlations (.18 to .65) suggests adequate discrimination without excessive redundancy. The confirmatory factor analysis provides empirical support for the hypothesized three-factor structure of SLSA in this population. The acceptable model fit indices (CFI = .91, RMSEA = .068) align with or exceed those reported in validation studies of similar instruments in other cultural contexts (Cheng, 2004; Liu & Huang, 2011). The standardized factor loadings (.48 to .82) indicate that items effectively measure their intended constructs, with the strongest loadings observed for coping strategy items, perhaps reflecting greater specificity in these items compared to broader anxiety source items.

The instrument represents a methodological advance over previous approaches in several respects. First, it integrates assessment of anxiety antecedents, manifestations, and coping mechanisms within a unified framework, providing a more comprehensive profile than instruments focusing exclusively on anxiety experiences. Second, the systematic adaptation process following international guidelines (Hambleton, 2005) enhances cultural validity while maintaining conceptual equivalence with established constructs. Third, the inclusion of context-specific items addressing factors like familial communication patterns and previous learning experiences enhances ecological validity for the target population.

5.2 Component Analysis and Theoretical Implications

The hierarchical pattern of endorsed items within each construct provides important insights into the nature of SLSA among Pashto-speaking undergraduates. The predominance of evaluative concerns as anxiety sources—fear of making mistakes (65%), public speaking anxiety (63%), and fear of negative evaluation (62%)—aligns with theoretical models emphasizing the social-evaluative nature of language anxiety (Horwitz et al., 1986) while suggesting that collectivist cultural contexts may amplify these concerns. This finding extends previous research indicating that fear of negative evaluation constitutes a core component of language anxiety across cultures (Liu, 2006) while highlighting its particular salience in contexts emphasizing social harmony and face preservation.

The symptom profile reveals interesting patterns in anxiety manifestation. The high endorsement of physiological symptoms (palpitations, 71.5%; trembling, 63%) suggests strong somatic arousal during speaking tasks, potentially reflecting heightened autonomic nervous system reactivity in anxiety-provoking social situations. The prominence of cognitive-behavioral symptoms (disorganized speech, 70%; becoming blank-minded, 68%) aligns with cognitive interference models of anxiety (Eysenck & Calvo, 1992), which posit that anxiety consumes working memory resources that would otherwise be available for task performance. These findings collectively support Spielberger's (1983) conceptualization of anxiety as a multidimensional response system with interacting cognitive, affective, physiological, and behavioral components.

The coping strategies identified as most effective emphasize relational and environmental factors rather than individual techniques. Friendly error correction (74.5% endorsement), teacher encouragement (73.5%), and task familiarity (71%) all reflect the importance of supportive social contexts and predictable learning environments. This pattern diverges somewhat from Western studies where individual coping strategies like positive self-talk and relaxation techniques often feature prominently (Kondo & Ying-Ling, 2004), suggesting cultural differences in preferred coping approaches. In collectivist cultures, social support systems may play a more crucial role in stress management than individual coping resources (Kim, Sherman, & Taylor, 2008).

The inter-construct correlations provide empirical support for theoretical relationships between anxiety components. The strong positive correlation between Sources and Symptoms ($r = .68$) validates the theoretical link between cognitive appraisals of threatening situations and subsequent anxiety responses. The moderate negative correlations between Coping Strategies and both Sources ($r = -.42$) and Symptoms ($r = -.38$) suggest that effective coping mechanisms may buffer against both the perception of threats and the experience of symptoms, though the cross-sectional design precludes causal inferences.

5.3 Gender Differences

The observed gender differences align with broader patterns in anxiety research while presenting some nuances specific to language learning contexts. Female participants reported significantly higher scores on both Sources and Symptoms of SLSA, consistent with meta-analytic findings indicating greater self-reported anxiety among females across various domains (McLean & Anderson, 2009). This pattern may reflect genuine differences in anxiety experiences, differential socialization regarding emotional expression, or response biases related to gender norms.

Interestingly, male participants reported higher scores on Coping Strategies, suggesting greater perceived efficacy or utilization of coping mechanisms. This finding contrasts with some studies finding no gender differences in coping (Tamres, Janicki, & Helgeson, 2002) and merits further investigation. Potential explanations include gender differences in help-seeking behaviors, socialization regarding self-reliance, or differential access to coping resources within the educational environment.

5.4 Methodological Contributions and Limitations

This study makes several methodological contributions to the assessment of language anxiety. First, it demonstrates a systematic procedure for adapting multiple existing scales into a culturally appropriate comprehensive instrument, providing a model for similar adaptations in other linguistic and cultural contexts. Second, it provides psychometric validation for SLSA assessment in an under-researched population, establishing baseline data for future comparative and intervention studies. Third, it applies advanced psychometric techniques (confirmatory factor analysis) to examine the underlying structure of language anxiety, moving beyond the descriptive approaches common in earlier research.

Several limitations warrant consideration when interpreting results. First, the cross-sectional design precludes causal inferences about relationships between constructs. Longitudinal designs would better elucidate how anxiety sources, symptoms, and coping strategies interact over time. Second, the sample, while adequate for factor analysis, was drawn from a single university, potentially limiting generalizability to other Pashto-speaking populations or educational contexts. Multi-institution sampling would enhance representativeness. Third, the reliance on self-report measures introduces potential response biases, particularly social desirability concerns in collectivist cultures. Future research would benefit from multi-method assessment incorporating physiological measures (e.g., heart rate variability), behavioral observations, and peer or teacher ratings.

The sample size, while exceeding minimum requirements for factor analysis, falls below ideal thresholds for stable parameter estimates. Simulation studies suggest that sample sizes of 200-300 are adequate for models with 3-4 factors when communalities are moderate to high (MacCallum, Widaman, Zhang, & Hong, 1999), which aligns with our findings. However, replication with larger samples would provide more precise estimates.

Finally, while the instrument demonstrated good psychometric properties, further validation is needed, particularly regarding criterion-related validity. Future studies should examine relationships with relevant external criteria such as speaking performance, course grades, and language proficiency test scores.

6. CONCLUSION AND PRACTICAL APPLICATIONS

6.1 Theoretical Implications

This study contributes to theoretical understanding of SLSA in several ways. First, it provides empirical support for conceptualizing SLSA as a multidimensional construct comprising distinct but interrelated components: cognitive-situational antecedents (sources), multi-system manifestations (symptoms), and behavioral-cognitive responses (coping strategies). This tripartite framework offers a more comprehensive understanding than unidimensional models focusing exclusively on anxiety experiences.

Second, the findings highlight the importance of cultural factors in shaping anxiety experiences. The predominance of evaluative concerns and the emphasis on relational coping strategies suggest that collectivist cultural values significantly influence how language anxiety is experienced and managed. These findings support calls for culturally nuanced theories of language anxiety that account for variation across cultural contexts (Dewaele, 2013).

Third, the observed gender differences contribute to ongoing theoretical discussions about the role of gender in language learning psychology. The pattern of higher anxiety but also potentially higher coping efficacy among males suggests complex interactions between gender, anxiety experiences, and coping resources that merit further theoretical elaboration.

6.2 Practical Applications for Assessment

The validated instrument has several practical applications for language educators, educational psychologists, and researchers:

1. **Screening and Identification:** The instrument can serve as a screening tool to identify students with high SLSA who may benefit from targeted interventions. Cutoff scores could be developed based on percentile ranks within specific populations.
2. **Comprehensive Assessment:** Unlike instruments focusing narrowly on anxiety experiences, this tool provides a comprehensive profile encompassing vulnerability factors (sources), current difficulties (symptoms), and protective factors (coping strategies). This holistic assessment supports more nuanced intervention planning.
3. **Progress Monitoring:** The instrument could be administered at multiple time points to monitor changes in anxiety components during language courses or following interventions, providing valuable feedback for program evaluation.
4. **Research Tool:** The psychometrically validated instrument enables rigorous research on SLSA in Pashto-speaking populations and potentially other similar cultural contexts, facilitating cross-cultural comparisons and theory testing.

6.3 Intervention Implications

The findings suggest several evidence-based directions for intervention development:

1. **Targeting Evaluative Concerns:**

Given the prominence of fear of negative evaluation and fear of making mistakes, interventions should include cognitive restructuring techniques to address perfectionistic thinking and excessive concern about others' judgments. Psychoeducation about the normalcy of errors in language learning may help normalize mistakes.

2. **Graduated Exposure:**

The high public speaking anxiety suggests the value of systematic desensitization through graduated exposure. Speaking tasks should progress from low-stakes activities (pair work, small groups) to higher-stakes situations (whole class presentations), with each step providing mastery experiences.

3. **Teacher Training:**

The emphasis on teacher-related coping strategies (friendly correction, encouragement) highlights the crucial role of instructors. Professional development should train teachers in anxiety-sensitive pedagogies, including supportive error correction techniques, positive reinforcement, and creation of psychologically safe learning environments.

4. **Coping Skills Training:**

While relational coping was emphasized, training in individual coping strategies (relaxation techniques, cognitive restructuring, preparation strategies) may enhance students' self-efficacy in managing anxiety symptoms.

5. **Environmental Modifications:**

Creating predictable, low-threat classroom environments through clear expectations, familiar task formats, and non-competitive learning structures may reduce situational anxiety triggers.

6.4 Directions for Future Research

Several promising directions emerge for future research:

1. **Longitudinal Studies:**

Tracking SLSA components over time would elucidate developmental trajectories, causal relationships between components, and predictors of resilience versus chronic anxiety.

2. **Intervention Studies:**

Experimental and quasi-experimental studies testing the efficacy of interventions targeting specific anxiety components identified in this research would advance evidence-based practice.

3. **Cross-Cultural Comparisons:**
Administering the adapted instrument to diverse cultural groups would enable systematic examination of cultural variations in SLSA structure and manifestations.

4. **Multimethod Assessment:**
Integrating self-report measures with physiological indicators, behavioral observations, and performance measures would provide a more comprehensive understanding of SLSA and its impact.

5. **Examination of Moderators:**
Investigating factors that moderate relationships between anxiety components (e.g., personality traits, learning styles, previous language experiences) would enhance understanding of individual differences.

In conclusion, this study provides a psychometrically validated instrument and empirical foundation for understanding SLSA among Pashto-speaking undergraduate students. The findings highlight the multidimensional nature of language anxiety and underscore the importance of culturally sensitive assessment and intervention approaches. By addressing both vulnerability factors and protective resources, educators and psychologists can develop more effective strategies to support language learners in overcoming anxiety barriers and achieving their communicative potential.

REFERENCES

6. Ahmed, A. S. (2013). The thistle and the drone: How America's war on terror became a global war on tribal Islam. Brookings Institution Press.
7. Awan, R. N., Azher, M., Anwar, M. N., & Naz, A. (2010). An investigation of foreign language classroom anxiety and its relationship with students' achievement. Journal of College Teaching & Learning, 7(11), 33-40.
8. Byrne, B. M., & van de Vijver, F. J. (2010). Testing for measurement and structural equivalence in large-scale cross-cultural studies: Addressing the issue of nonequivalence. International Journal of Testing, 10(2), 107-132.
9. Cheng, Y. S. (2004). A measure of second language writing anxiety: Scale development and preliminary validation. Journal of Second Language Writing, 13(4), 313-335.
10. Clevenger, T., & Halvorson, S. K. (1992). The Speaker Anxiety Scale: Development and preliminary validation. Communication Reports, 5(1), 48-57.
11. Dewaele, J. M. (2010). Emotions in multiple languages. Palgrave Macmillan.
12. Dewaele, J. M. (2013). The link between foreign language classroom anxiety and psychoticism, extraversion, and neuroticism among adult bi-and multilinguals. The Modern Language Journal, 97(3), 670-684.
13. Deyuan, H. (2017). Foreign language speaking anxiety and coping strategies: Scale validation. Journal of Language and Education, 3(4), 65-74.
14. Enders, C. K. (2010). Applied missing data analysis. Guilford Press.
15. Eysenck, M. W., & Calvo, M. G. (1992). Anxiety and performance: The processing efficiency theory. Cognition and Emotion, 6(6), 409-434.
16. Field, A. (2013). Discovering statistics using IBM SPSS Statistics (4th ed.). Sage.
17. Gorsuch, R. L. (1983). Factor analysis (2nd ed.). Lawrence Erlbaum.
18. Hambleton, R. K. (2005). Issues, designs, and technical guidelines for adapting tests into multiple languages and cultures. In R. K. Hambleton, P. F. Merenda, & C. D. Spielberger (Eds.), Adapting educational and psychological tests for cross-cultural assessment (pp. 3-38). Lawrence Erlbaum.
19. Horwitz, E. K. (2001). Language anxiety and achievement. Annual Review of Applied Linguistics, 21, 112-126.
20. Horwitz, E. K., Horwitz, M. B., & Cope, J. (1986). Foreign language classroom anxiety. The Modern Language Journal, 70(2), 125-132.
21. International Test Commission. (2017). The ITC guidelines for translating and adapting tests (2nd ed.). International Journal of Testing, 18(2), 101-134.
22. Jabeen, F., Mahmood, M. A., & Rasheed, S. (2012). English language learning anxiety in Pakistani students: A case of behavioral science departments in public sector universities. South Asian Studies, 27(2), 423-437.
23. Johnson, T. P., & van de Vijver, F. J. (2003). Social desirability in cross-cultural research. In J. A. Harkness, F. J. van de Vijver, & P. P. Mohler (Eds.), Cross-cultural survey methods (pp. 195-204). Wiley.
24. Kim, H. S., Sherman, D. K., & Taylor, S. E. (2008). Culture and social support. American Psychologist, 63(6), 518-526.
25. Kline, R. B. (2016). Principles and practice of structural equation modeling (4th ed.). Guilford Press.
26. Kondo, D. S., & Ying-Ling, Y. (2004). Strategies for coping with language anxiety: The case of students of English in Japan. ELT Journal, 58(3), 258-265.
27. Lazarus, R. S., & Folkman, S. (1984). Stress, appraisal, and coping. Springer.
28. Liu, M. (2006). Anxiety in Chinese EFL students at different proficiency levels. System, 34(3), 301-316.
29. Liu, M., & Huang, W. (2011). An exploration of foreign language anxiety and English learning motivation. Education Research International, 2011, Article ID 493167.

30. Liu, M., & Jackson, J. (2008). An exploration of Chinese EFL learners' unwillingness to communicate and foreign language anxiety. The Modern Language Journal, 92(1), 71-86.
31. MacCallum, R. C., Widaman, K. F., Zhang, S., & Hong, S. (1999). Sample size in factor analysis. Psychological Methods, 4(1), 84-99.
32. MacIntyre, P. D. (1999). Language anxiety: A review of the research for language teachers. In D. J. Young (Ed.), Affect in foreign language and second language learning (pp. 24-45). McGraw-Hill.
33. MacIntyre, P. D., & Gardner, R. C. (1994). The subtle effects of language anxiety on cognitive processing in the second language. Language Learning, 44(2), 283-305.
34. Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. Psychological Review, 98(2), 224-253.
35. McCroskey, J. C. (1970). Measures of communication-bound anxiety. Speech Monographs, 37(4), 269-277.
36. McCroskey, J. C. (2015). An introduction to rhetorical communication (9th ed.). Routledge.
37. McLean, C. P., & Anderson, E. R. (2009). Brave men and timid women? A review of the gender differences in fear and anxiety. Clinical Psychology Review, 29(6), 496-505.
38. Nunnally, J. C. (1978). Psychometric theory (2nd ed.). McGraw-Hill.
39. Rahman, T. (2005). Passports to privilege: The English-medium schools in Pakistan. Peace and Democracy in South Asia, 1(1), 24-44.
40. Scovel, T. (1978). The effect of affect on foreign language learning: A review of the anxiety research. Language Learning, 28(1), 129-142.
41. Shahbaz, M., & Liu, Y. (2012). Complexity of personality traits and speaking anxiety of ESL learners. Journal of Language Teaching and Research, 3(3), 510-517.
42. Shamim, F. (2011). English as the language for development in Pakistan: Issues, challenges and possible solutions. In H. Coleman (Ed.), Dreams and realities: Developing countries and the English language (pp. 291-310). British Council.
43. Spielberger, C. D. (1983). Manual for the State-Trait Anxiety Inventory (STAI). Consulting Psychologists Press.
44. Tamres, L. K., Janicki, D., & Helgeson, V. S. (2002). Sex differences in coping behavior: A meta-analytic review and an examination of relative coping. Personality and Social Psychology Review, 6(1), 2-30.
45. Tegey, H., & Robson, B. (1996). A reference grammar of Pashto. Center for Applied Linguistics.
46. Woodrow, L. (2006). Anxiety and speaking English as a second language. RELC Journal, 37(3), 308-328.
47. Young, D. J. (1991). Creating a low-anxiety classroom environment: What does language anxiety research suggest? The Modern Language Journal, 75(4), 426-439.