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Psychological Stability and its Relationship with English Language Competency among Physical Education and Sports Science Students

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Abstract

This study aims to develop scales for psychological stability and English language competency among students of Physical Education and Sports Sciences at the University of Kirkuk. It also seeks to assess the levels of psychological stability and English language competency and to examine the correlation between these two variables. The research employs a descriptive survey methodology. The study population consists of 658 students enrolled in the Physical Education and Sports Sciences program at the University of Kirkuk, from which a sample of 420 students was selected. The scales for psychological stability and English language competency were developed and analyzed using the Statistical Package for the Social Sciences (SPSS). The findings indicate that the level of psychological stability among the students is high; however, their English language competency is notably low. Furthermore, no statistically significant correlation was found between psychological stability and English language competency.

Keywords: Psychological stability, English language competency, physical education, sports sciences.

1. Introduction

Faculties of Physical Education and Sports Sciences are undergoing significant transformations, with growing recognition that psychological and linguistic factors are essential for student success. These elements create an educational framework aligned with modern academic and professional demands.

Psychological stability significantly influences university students' cognitive development and language learning capabilities, particularly in English—the dominant language of scientific communication. Students with greater psychological resilience demonstrate enhanced comprehension of specialized terminology and more effective engagement with international academic resources. Research indicates that psychological stability and language proficiency are mutually reinforcing, creating a positive cycle that improves overall academic performance.

Defined as a dynamic state of emotional and cognitive steadiness, psychological stability enables individuals to respond flexibly to various situations by integrating new experiences with existing knowledge (Habash & AbdulHasan, 2018).

Sports participation notably enhances this stability by reducing stress and anxiety while promoting mental well-being (Melod, 2019).

Studies demonstrate that psychologically stable students exhibit increased self-confidence, reduced fear of errors, and higher levels of concentration, ultimately achieving better academic outcomes including improved English competency (Weinberg & Gould, 2019).

This connection is particularly evident in students' ability to communicate effectively at international conferences and overcome foreign language anxiety.

The relationship is bidirectional: enhanced English proficiency builds self-confidence, which further strengthens psychological stability. However, undergraduate students often experience emotional fluctuations that hinder language acquisition, particularly when fear inhibits participation in language-based activities.

This study examines the correlation between psychological stability and English language competency among Physical Education and Sports Sciences students at the University of Kirkuk. It investigates whether psychological stability directly facilitates language learning or if instructional methods and motivation play more critical roles. The research aims to inform targeted intervention programs that address language deficiencies and better prepare students for competitive roles in the global job market.

Research Objectives

The primary objectives of this study are as follows:

a. To develop two standardized scales, one for measuring psychological stability, and another for assessing English language competency among students of Physical Education and Sports Sciences at the University of Kirkuk.
b. To determine the level of psychological stability among students and identify any significant patterns or influencing factors.
c. To evaluate the level of English language competency among students and explore its correlation with psychological stability.
d. To examine whether psychological stability has a direct impact on students' ability to acquire and use English effectively in academic and professional settings.

2. Methodology

2.1 Design of the Study

The study employed the descriptive survey method, as it is the most suitable methodology for the nature of the research topic. This quantitative approach enables the identification of the characteristics and dimensions of the studied phenomenon within its natural context by systematically collecting, organizing, and analyzing data to derive meaningful conclusions. Additionally, the descriptive survey method is distinguished by its ability to describe and interpret the phenomenon objectively, without researcher interference, thereby ensuring the provision of accurate and unbiased information that effectively addresses the research questions (Al-Qahtani, 2021, p. 167).

2.2 Population of the Study

The research population consisted of 658 students enrolled in the Department of Physical Education and Sports Sciences at the University of Kirkuk, according to the latest statistics for the 2024-2025 academic year. Table (01) provides an overview of the research population.

Table 01. *Illustration of the research population*

No.	Students of Physical Education and Sports Sciences	Number of students	Percentage
1	Research population	658	%100

2.2.1 Sample of the Study

The research sample consisted of 420 students from the College of Physical Education and Sports Sciences at the University of Kirkuk, representing 63.83% of the total research population. The sample was distributed as follows: 236 students for the construction sample, 20 students for the exploratory experiment, 14 students excluded from the study, 22 students for the stability sample, and 128 students for the final application sample

Table (02) provides a detailed distribution of the sample across the different groups.

Table 02. *Distribution of the research sample, including exploratory experiments, excluded cases, stability sample, and final application*

No.	Students of Physical Education and Sports Science	Number of students	Percentage
1	Construction Sample	236	%56.190
2	Exploratory Experiment	20	%4.762
3	Excluded	14	%3.333
4	Stability Sample	22	%5.239
5	Application Sample	128	%30.476
6	Total	420	%100

2.2.2 *Exploratory Experiment*

The exploratory experiment is a preliminary study designed to evaluate the clarity of research tools, including items and instructions, as well as to determine the time required for responses. This experiment was conducted on 20 students from the College of Physical Education and Sports Sciences. The results indicated that the average response time was 19 minutes, with a range of 18 to 20 minutes.

2.3 Data Collection Tools

To measure the key variables in this study—psychological stability and English language competency—the researchers developed a measurement tool following a structured set of scientific procedures for scale construction.

2.3.1 *Psychological Stability Scale*

The development of the psychological stability scale requires adherence to specific scientific steps. These steps begin with identifying the theoretical foundations that underpin the scale. Cronbach emphasizes the importance of clearly defining concepts and structural components before initiating the construction process to ensure a scientifically sound framework.

2.3.1.1 Identification of Theoretical Foundations for Scale Construction

Theoretical foundations are a critical component in the development of scientific measurement tools, as they provide a conceptual framework for defining measurement domains. This process is based on two key pillars; first, the analysis and deconstruction of scientific literature and theories – reviewing existing research to extract key psychological constructs. Second, systematic scale construction – developing declarative items and assigning relative importance to each domain within the scale

2.3.1.2 Identification of Domains in the Psychological Stability Scale

The researchers conducted a comprehensive review of psychological stability and English language competency, dividing tasks systematically. Their findings were evaluated by expert reviewers to ensure validity. To assess expert agreement, the chi-square test was applied, setting 75% as the acceptance criterion, with a tabular chi-square value of 3.84 at one degree of freedom and a significance level of 0.05. This methodological approach ensures scientific reliability in the construction of the study's measurement tools.

Table 03. The chi-square test results and the percentage of expert opinions on the validity of the Psychological Stability Scale domains

No	Domains of psychological stability	Number of experts	Number of experts		Number of experts		Calculated Chi-Square	Tabular Chi-Square
			Agreeing	Percentage	Disagreeing	Percentage		
1	Managing emotions and feelings	17	15	%88.235	2	%11.765	9.941	3.84
2	Stress and anxiety management	17	14	%82.353	3	%17.647	7.118	
3	Psychosocial and social adaptation	17	10	%58.823	7	%41.177	0.529	
4	Academic and professional adaptation	17	17	%100	0	0%	17	
5	Intellectual and cognitive stability	17	9	%52.942	8	%47.58	0.059	
6	Self-confidence and self-efficacy	17	16	%94.117	1	%5.883	13.235	
7	Satisfaction and psychological well-being	17	12	%70.589	5	%29.411	2.882	
8	Life balance	17	11	%64.705	6	%35.295	1.471	

Table (03) above presents the results of the expert evaluation and arbitration process for the Psychological Stability Scale. Following a comprehensive review by specialists, significant modifications were made to ensure the scale's scientific validity. Based on expert recommendations, four domains that did not meet the required agreement threshold were omitted. The excluded domains are; psychological and social adaptation, intellectual and cognitive stability, satisfaction and psychological well-being, and life balance. As a result, the final version of the Psychological Stability Scale consists of four core domains, which effectively capture the key dimensions of psychological stability, namely; managing emotions and feelings, stress and anxiety management, academic and professional adaptation, self-confidence and self-efficacy.

Table 04. *The final selection of domains, along with their ranking in the scale*

No	Domains of psychological stability	Number of Agreeing Experts	Percentage	Domain sequence
1	Managing emotions and feelings	15	%88.235	3
2	Stress and anxiety Management	14	%82.353	4
3	Academic and professional adaptation	17	%100	1
4	Self-confidence and self-efficacy	16	94.117	2

Table 05. The arithmetic mean of the psychological stability domains, their relative importance, and the number of items assigned to each domain after rounding.

No	Psychological Stability Domain	Mean	100/Number of Domains	100/ (25 X Mean)	Number of initial items
1	Academic and professional adaptation	2.15	25	= 100 / (25×2.15) 0.53	× 2 x 0.537 11=10
2	Self-confidence and self-efficacy	2.79	25	= 100 / (25×2.79) 0.69	2 × 0.697 14 =10×
3	Managing emotions and feelings	2.22	25	= 100 / (25× 2.22) 0.55	10× 2 × 0.555 11=
4	Stress and anxiety Management	2.30	25	= 100 / (25 × 2.30) 0.57	10× 2 × 0.575 12=
5	Total number of items	Mean for each domain	25 = 4 / 100 For each domain	Mean for each) 100/ (25 × domain	48 items in its initial version

2.3.1.3 Preparing the scale items in their initial form

The process of constructing psychological and educational measurement scales is a rigorous research endeavor aimed at developing a comprehensive and coherent set of items. The researchers adopted a systematic approach, drawing upon various sources of knowledge, including a thorough review of relevant scientific literature and an analysis of existing measurement tools. Special consideration was given to the unique characteristics of the target research population to ensure the scale's relevance and applicability.

The formulation of the scale's items adhered to stringent scientific standards, prioritizing conceptual clarity, objectivity, and comprehensiveness. The scale employed a five-point Likert-type response format, with the following alternatives: "Always applies," "Often applies," "Sometimes applies," "Rarely applies," and "Never applies." This response structure was selected to facilitate a nuanced assessment of participants' psychological stability levels and to distinguish variations in their responses effectively. The fundamental principles in formulating items include: conciseness to prevent monotony, clarity and ease of comprehension, thorough coverage of all aspects of the scale, avoidance of direct indication of the answer, and simplicity in phrasing.

2.3.1.4 Standard Characteristics of the Psychological Stability Scale

The researchers conducted a logical analysis of the items as a fundamental step in the preparation of the scale, with the aim of ensuring that the items accurately represent the trait to be measured. The scale was presented to specialists and experts to verify its apparent validity, where they were asked to assess the suitability and relevance of the items to the concerned domains. The evaluation process focused on examining the alignment of the items with the scientific concept, the clarity of the phrasing, and the accuracy of the expression in capturing the target trait for measurement. The ultimate goal was to ensure the validity and reliability of the research tool through expert opinions.

2.3.1.4.1 Face Validity

Face validity, is a fundamental process aimed at verifying whether the scale appropriately measures the intended construct with respect to its structure. This procedure involves an expert review of the scale's content and individual items. The researchers assessed face validity by presenting the scale to a group of expert evaluators in psychology and education. The evaluation criteria focused on the clarity, relevance, and appropriateness of the items' relativity to the construct of psychological stability. The experts' feedback was systematically analyzed to identify necessary modifications, enhancing the overall robustness of the instrument.

To quantify the validity of the scale, the Chi-square test for goodness of fit was employed to analyze the level of expert agreement on each item's appropriateness. A consensus threshold of 75% agreement was set as the acceptance criterion. The tabulated Chi-square value (χ^2) was 3.84 at one degree of freedom ($df = 1$) and a significance level of 0.05. Items that failed to meet this criterion were either revised or eliminated to ensure the scale's validity.

Table 06. The results of the Chi-square test and the percentage of expert agreement regarding the validity of the psychological stability scale items.

No	Skills	I tem Number	Number of experts	Number of experts		Number of experts		Calculated Chi-Square	Tabular Chi-Square
				Agreeing	Percentage	Disagreeing	Percentage		
1	Academic and professional adaptation	11 ،9 ،7 ،3	17	16	%94.117	1	%5.883	13.235	3.84
		8 ،6 ،2	17	14	%82.353	3	%17.647	7.118	
		4 ،1	17	13	%76.470	4	%23,530	4.765	
		10 ، 5	17	12 or less	------	5 or more	-------	2،882	
2	Self-confidence and self-efficacy	17 ،14 21 ،19،	17	17	%100	0	%0	17	
		24، 22 ،13	17	14	%82.353	3	%17.647	7.118	
		،15 ،12 23 ،16	17	13	%76.470	4	%23,530	4.765	
		، 20 ،18 25	17	12 or less	------	5 or more	-------	2،882	
3	Managing emotions and feelings	34، 30 ،29	17	17	%100	0	%0	17	
		33، 31، 27	17	16	%94.117	1	%5.883	13.235	
		35، 32 ،26 36،	17	14	%82.353	3	%17.647	7.118	
		28	17	12 or less	------	5 or more	-------	2.882	
4	Stress and anxiety Management	44، 42 ،41 48، 46،	17	17	%100	0	%0	17	
		،43، 40 47	17	15	%88.235	2	%11.765	9.941	
		38، 37 45 ، 39،	17	14	%82.353	3	%17.647	7.118	
		--------	17	12 or less	------	5 or more	-------	2.882	

Table (06) demonstrates the agreement obtained on the validity of (42) items distributed across (4) domains. The items presented in Table (07) were reviewed by a group of experts and specialists to determine the direction of positive and negative items, with the researchers incorporating their guidance on this matter. Subsequently, the items within each domain were distributed according to the scale outlined in Table (07), where the domain numbers were assigned according to the distribution shown. Table (07) illustrates this

Table 07. The numbers of the positive and negative items

No	Domain	Positive item numbers	Negative item numbers
1	Academic and professional adaptation	9 ،8 ،6 ،4 ،2 ،1	11 ، 7، 3
2	Self-confidence and self-efficacy	،16 ،15 ،14 ،13 ،12 24 ،23 ،21	22، 19 ،17
3	Managing emotions and feelings	36 ،32 ،31 ، 29 ،27	35 ،34 ،33 ،30 ،26
4	Stress and anxiety management	،44 ،43 ،41 ،39 ،38 48 ،46	47 ،45 ،42 ،40 ،37
5	Total	26 positive items	16 negative items
		Total number of items: 42	

2.3.1.5 Statistical Analysis of the Psychological Stability Scale Items

The examination of measurement tools is essential in the field of modern psychological and educational measurement, as it plays a vital role in enhancing and developing measurement instruments with high efficiency. This process is characterized by its substantial ability to accurately assess human traits and characteristics. Through precise analysis, researchers can continuously improve their research tools, which contributes to strengthening the reliability and validity of results in psychological and educational studies.

2.3.1.5.1 Discriminative Validity (Extreme Group Validity)

The discriminative ability of the items in extreme group validity is considered one of the fundamental characteristics of the scale and its items. After administering the scale to a sample of 236 students from the College of Physical Education and Sports Sciences, the answer sheets were corrected, and the discriminative power of the items was calculated. The participants' scores were ranked from highest to lowest, with the top and bottom 27% of scores identified as the two extreme groups. The number of individuals in each group was (63,72), which, when rounded to the nearest percentage, became (64) students from the College of Physical Education and Sports Sciences. The independent-sample t-test was used to calculate the differences between the two groups in the scores of each item from the scale's sections. The calculated t-value represents the discriminative power of the item.

Through the analysis of the statistical data, a significant variation is observed in the computed t-test values, ranging between two key limits: the lowest value of 0.121 and the highest value recorded at 10.259. Based on the statistical processing of the data, it was concluded that two items should be excluded from the scale, namely items 9 and 20, as they did not meet the required criteria for discriminative power. This exclusion is supported by precise statistical data,

where the computed t-values for these items were lower than the critical table values, and their significance (sig) values were higher than the established level of 0.05, indicating their unsuitability for the targeted scale.

2.3.1.5.2 Internal Consistency of the Psychological Stability Scale Items

While logical analysis of the items is an essential step in evaluating their validity, empirical integrity provides more objective indicators by examining the correlation between the score of each item and the overall scale score. The effectiveness of the items and their ability to distinguish is assessed through the calculation of the internal consistency coefficient, which reveals the homogeneity of the items in measuring the target attribute. The validation process for the items is finalized by excluding those with poor discrimination and then calculating the Pearson correlation coefficient between the score of each item and the overall score of the scale. This approach contributes to enhancing the quality of the scale and improving the accuracy of its results (Allam, 2006: 257). This can be observed in Table (08).

Table 08. The internal consistency between each item and the scale as a whole.

item	R value	Sig	item	R value	Sig
1	0،449	0،000	22	0،393	0،000
2	0،252	<0،001	23	0،492	0،000
3	0،467	0،000	24	0،440	0،000
4	0،663	0،000	25	0،652	0،000
5	0،634	0،000	26	0،621	0،000
6	0،576	0،000	27	0،681	0،000
7	0،664	0،000	28	0،573	0،000
8	0،620	0،000	29	0،650	0،000
9			30	0،672	0،000
10	0،268	<0،001	31	0،097	0،231
11	0،479	0،000	32	0،527	0،000
12	0،371	0،000	33	0،491	0،000
13	0،472	0،000	34	0،597	0،000
14	0،438	0،000	35	0،639	0،000
15	0،417	0،000	36	0،650	0،000
16	0،435	0،000	37	0،409	0،000
17	0،612	0،000	38	0،615	0،000
18	0،413	0،000	39	0،520	0،000
19	0،321	0،000	40	0،622	0،000
20			41	0،577	0،000
21	0،497	0،000	42	0،133	0،132
Total number of items in the final version: 38 items					

Based on the analysis of the results in Table (08), it is evident that the calculated correlation values (r) ranged from a minimum of (0.097) to a maximum of (0.681). Upon reviewing the data, it was found that most of the items achieved acceptable statistical significance, as their correlation coefficients with the total score exceeded the critical value of the correlation coefficient at a significance level of (0.05). However, two items, (31 and 42), were excluded as their correlation values were lower than the tabulated value (r), leading to their removal from the scale. Consequently, the final version of the scale consists of (38) items. The correlation values between the total score of each domain and the overall score of the scale were also calculated. The correlations of the subdomains with the total score serve as key indicators of homogeneity, helping to define the behavior domain we aim to measure. The results indicated that the correlation values were statistically significant, with the calculated correlation coefficients being greater than the critical value of the correlation coefficient at a significance level of (0.05), as shown in Table (09).

Table 09. The correlation coefficient between the domain score and the overall scale score.

Domains	Correlation coefficient (r)	Sig	Significance level
Academic and professional adaptation	0،683	0،001 <	Significant
Self-confidence and self-efficacy	0،712	0،001 <	Significant
Managing emotions and feelings	0،639	0،001 <	Significant
Stress and anxiety management	0،641	0،001 <	Significant

It is clear from Table (09) that there is a statistically significant correlation between the four domains of the psychological stability scale, as the significance level (Sig) was less than 0.05. This indicates that each domain is meaningfully related to the overall scale, further supporting the internal consistency and construct validity of the measurement tool.

2.3.1.5.3 Scale Reliability

Reliability is a fundamental criterion in the evaluation of psychological and educational measurement instruments, as it reflects the consistency of measurement results over time and across different application conditions. In other words, test reliability assesses the extent to which individuals obtain consistent scores when the test is administered repeatedly. To ensure the reliability of the psychological stability scale, the researchers employed multiple statistical methods.

2.3.1.5.a Split-Half Method for Scale Items

To estimate the reliability of the scale, the researchers utilized the split-half method, in which the test items were divided into two subsets: one containing the odd-numbered items and the other comprising the even-numbered items. Following the administration of the scale, the correlation coefficient was calculated using both the split-half and Pearson methods. Additionally, the Spearman–Brown and Guttman formulas were applied to adjust the reliability estimates, while Cronbach's alpha was employed to assess variance in accordance with the nature of the scale. The results demonstrated that the Spearman–Brown reliability coefficient for the psychological stability scale was 0.942. Similarly, the reliability coefficient obtained through the corrected split-half method was 0.942, whereas the Cronbach's alpha coefficient was 0.930. These values align with the established thresholds for acceptable reliability in psychological and educational research, indicating that the psychological stability scale possesses a high degree of reliability.

2.3.1.5.b Standard Error of Measurement for the Psychological Stability Scale

The standard error of measurement (SEM) is a key statistical indicator that assesses the precision and reliability of measurement instruments by quantifying the deviation of observed scores from true scores. This error is influenced by various factors, including testing conditions and the psychological state of the respondent. There is an inverse relationship between the reliability coefficient and the standard error—higher reliability results in a lower standard error. Since no measurement tool is entirely free from error, some variation in scores is expected when the scale is administered multiple times. Given that the reliability coefficient of the psychological stability scale is 0.942 and the standard deviation is 24.139, the standard error of measurement is calculated as ± 1.571. This indicates that an individual's true score on the scale is likely to fall within a range of ± 1.571 standard error units from their observed score.

2.3.1.6 Final Refinement of the Psychological Stability Scale

Following the completion of the necessary psychometric analyses, the final version of the psychological stability scale consists of 38 items. The response format follows a five-point Likert scale, where participants choose from the following options: "Always applies" (5 points), "Often applies" (4 points), "Sometimes applies" (3 points), "Rarely applies" (2 points), and "Never applies" (1 point). For negatively worded items, the scoring is reversed, with "Always applies" assigned 1 point and "Never applies" assigned 5 points. The total score on the scale ranges from 38 to 190, with a hypothetical mean of 114. This refined scoring system ensures a balanced and standardized assessment of psychological stability.

2.3.2 *English Competency Scale*

2.3.2.1 Theoretical Foundations for Developing the Skills Scale

The development of the English Competency Skills Scale is a strategic process designed to comprehensively and accurately measure language proficiency. This process involves analyzing language skills into their primary and sub-components while ensuring a holistic approach that acknowledges the interdependence of these elements.

Pillar I: Conceptual Analysis of English Language Competency Dimensions and Skills: Breakdown of core language skills: writing, reading, listening, and speaking. Decomposition of each skill into subcomponents, including grammar, vocabulary, and linguistic structures.

Pillar II: Applied Framework for Scale Development: Establishing precise evaluation criteria for each skill, defining proficiency levels, as well as setting both quantitative and qualitative performance indicators.

The primary objective of this methodology is to construct a scale that accurately reflects overall language proficiency across multiple dimensions while maintaining precision and objectivity in assessment.

2.3.2.2 Identification of Skills in the English Competency Scale

The same methodological procedures used in developing the Psychological Stability Scale were applied to the construction of the English Competency Scale. Table (10) presents an overview of this process.

Table 10. *The results of English language competency skills*

No	English Language Skills	Number of experts	Number of experts		Calculated Chi-Square	Tabulated Chi-Square
			Approved	Percentage		
1	Writing	11	11	%100	11	3،84
2	Reading	11	11	%100	11	
3	Listening	11	11	%100	11	
4	Speaking	11	11	%100	11	

Based on the results presented in Table (10), the importance of the four foundational English language skills—reading, writing, speaking, and listening—was indisputably affirmed, as they received full scientific approval (100%). Additionally, knowledge of grammar and vocabulary was incorporated alongside these core skills, resulting in a total of five essential skills. These five domains—reading, writing, speaking, listening, and knowledge of grammar and vocabulary—constitute the fundamental basis of language proficiency, forming an integrated system of communication. Each skill plays a crucial and complementary role, ensuring a comprehensive evaluation and in-depth understanding of an individual's language abilities. The full scientific approval of these skills underlines their significance as the core pillars of English language assessment, making them indispensable in any model designed to measure language proficiency. Table (11) further illustrates this framework.

Table 11. The results for the skills, vocabulary, grammar, and their sequencing in the English language competency scale

No	English Language Domains	Number of Experts	Number of Experts		Calculated Chi-Square	Tabular Chi-Square
			Approved	Percentage		
1	Knowledge of Grammar and Vocabulary	11	11	%100	11	3،84
2	Reading	11	11	%100	11	
3	Writing	11	11	%100	11	
4	Speaking	11	11	%100	11	
5	Listening	11	11	%100	11	

Table 12. Arithmetic means of English language skills, their relative importance, and the number of items for each skill after rounding

No	English Language Competency	Mean	100/Number of Skills	(Mean X 25)/100	Number of Initial Items
1	Knowledge of Grammar and Vocabulary	2،47	20	= 100 / (20×2،11) 0،494	× 2 x 0،494 10=10
2	Reading	2،98	20	= 100 / (20×2،98) 0،596	2 × 0،596 12 =10×
3	Writing	2،35	20	= 100 / (20×2،35) 0،47	× 2 x 0،494 9=10
4	Speaking	1،85	20	= 100 / (20×1،85) 0،37	=10× 2 × 0،37 7
5	Listening	2،00	20	= 100 / (20 × 2،00) 0،40	10× 2 × 0،40 8=
	Total Number of items	Mean for Each Skill	20 = 5 / 100 Per Skill	Mean for Each) 100/ (25 × Skill	46 Initial Items

2.3.2.3 Preparation of the English Language Competency Skills Scale in its Initial Form

The researchers undertook a comprehensive review of relevant scientific literature and previous language proficiency measures, in collaboration with subject matter experts. Based on this review, they established clear criteria for formulating the scale's items. The initial version of the scale included 46 items, distributed across five language skills, with a five-point Likert scale system (very good, good, medium, weak, very weak). This system offered a high degree of flexibility in evaluation. Additionally, the researchers adhered to essential principles when drafting the items, ensuring that they were concise, clear, and covered all facets of language proficiency. The phrases were formulated in a way that avoided unnecessary complexity and did not directly hint at the correct response.

2.3.2.4 Standard Characteristics of the English Competency Scale

The procedures and steps followed in constructing the English Language Competency Scale mirrored those employed in the development of the psychological stability scale, which will be explained in the following sections.

2.3.2.4.1 Face Validity:

The same steps taken in the development of the psychological stability scale were replicated in constructing the English language competency scale, as demonstrated in Table (13).

Table 13. The results of the chi-square and the percentage of expert opinions on the validity of the English language competency skills items

No	Skills	Item Numbers	Number of Experts	Number of Experts		Number of Experts		Calculated Chi-Square	Tabular Chi-Square
				Approved	Percentage	Disapproved	Percentage		
1	Knowledge of Grammar and Vocabulary	9، 7، ،5 ،3	11	11	%100	0	0	11	3،84
		8 ،6 ،4 ،1	11	10	%90،910	1	%9،090	7،364	
		10 ،2	11	8 or less	-----	3 or more	-------	2،273	
2	Reading	،15 ،12 19 ،17	11	11	%100	0	0	11	
		،16 ،13 18	11	10	%90،910	1	%9،090	7،364	
		،14 ،11 21 ،20	11	9	%81،818	2	18،812	4،455	
		22	11	8 or less	-----	3 or more	-------	2،273	
3	Writing	،27 ،25 30	11	11	%100	0	0	11	
		،26 ،23 31، 28	11	9	%81،818	2	18،812	4،455	
		29 ،24	11	8 or less	-----	3 or more	-------	2،273	
4	Speaking	،35 ،32 36	11	10	%90،910	1	%9،090	7،364	
		،34 ،33 38 ،37	11	11	9	%81،818	2	18،812	
		-------- --	11	8 or less	-----	3 or more	-------	2،273	
5	Listening	،40 ،39 42	11	11	%100	0	0	11	
		،43 ،41 46 ،44	11	10	%90،910	1	%9،090	7،364	
		45	11	9	%81،818	2	18،812	4،455	

2.3.2.5 Statistical Analysis of the English Language Competency Skills Scale Items

The procedures and steps previously applied in the development of the Psychological Stability Scale were also followed in the construction of the English Language Competency Skills Scale.

2.3.2.5.1 Discriminative Validity (Extreme Group Validity)

The same procedures and steps used to establish the validity of extreme groups (discriminatory power) for the Psychological Stability Scale were replicated during the development of the English Language Competency Skills Scale. The statistics shows a significant variation in the calculated values of the statistical test (t), with values ranging from a minimum of 1.087 to a maximum of 13.047. Based on the statistical analysis of the data, four items (13, 16, 24, and 40) were excluded from the scale as they failed to meet the necessary criteria for discriminatory power. This decision was based on precise statistical data, where the calculated t-values were lower than the critical tabular value, and the significance (sig) values exceeded the established significance level of 0.05, indicating that these items were not suitable for inclusion in the scale.

2.3.2.5.2 Internal Consistency of the English Language Competency Skills Scale Items

The same procedures and steps followed in the development of the psychological stability scale were applied to assess the internal consistency of the English language competency skills scale.

Table 14. The internal consistency between the individual items and the scale as a whole

Items	r value	Sig	Items	r value	Sig
1	0،433	0،000	21	0،528	0،000
2	0،094	0،089	22	0،409	0،000
3	0،379	0،000	23	0،532	0،000
4	0،452	0،000	24		
5	0،310	0،000	25	0،626	0،000
6	0،442	0،000	26	0،648	0،000
7	0،415	0،000	27	0،661	0،000
8	0،524	0،000	28	0،598	0،000
9	0،423	0،000	29	0،627	0،000
10	0،275	<0،001	30	0،670	0،000
11	0،506	0،000	31	0،462	0،000
12	0،305	0،000	32	0،514	0،000
13			33	0،529	0،000
14	0،386	0،000	34	0،613	0،000
15	0،585	0،000	35	0،660	0،000
16			36	0،580	0،000
17	0،588	0،000	37	0،481	0،000
18	0،438	0،000	38	0،595	0،000
19	0،419	0،000	39	0،508	0،000
20	0،494		40		
			41	0،612	0،000
Total number of final items (36)					

Upon analyzing the results presented in Table (14), it is observed that the calculated correlation coefficients (r) ranged from a minimum value of (0.094) to a maximum value of (0.670). A closer inspection reveals that the majority of the items achieved statistically significant results, as their correlation coefficients with the total score exceeded the critical value of (r) at the 0.05 significance level. However, item number (2) was excluded from the scale, as its calculated value fell below the tabular (r) value. Consequently, this led to the exclusion of the item from the scale. Based on these findings, the final version of the scale was established with (36) items.

2.3.2.5.3 Scale Reliability

The same procedures and steps used to ensure the reliability of the psychological stability scale were also applied during the development of the English language competency skills scale.

2.3.2.5.3.a Split-Half Method for Scale Items:

The theoretical procedures applied to the psychological stability scale were reviewed, and it was found that the Spearman-Brown stability coefficient for the English language competency skills scale was (0.930). When applying the corrective half-segmentation equation, the stability coefficient was calculated as (0.928), while the stability coefficient using the alpha-Cronbach equation was (0.917). These values align with the accepted stability standards in the context of this study, confirming that the English Competency Skills Scale exhibits high stability.

2.3.2.5.3.b Standard Error of the English Language Competency Skills Scale Items:

The theoretical procedures followed in the psychological stability scale were applied here, and by using the standard error equation, we can quantitatively estimate the extent of variation. If the stability coefficient of the scale is (0.930) and the standard deviation is (23.272), the standard error is calculated to be (±1.514). This indicates that an individual's true score on the scale lies within a range of (±1.514) from the observed score, accounting for the standard error.

2.3.2.5.4 Final Refinement of the English Language Competency Skills Scale

Following the completion of the necessary scientific procedures for the English language competency skills scale, the scale now consists of (36) items in its final form. Respondents are asked to select one of five alternatives for each item: (very good, good, average, weak, very weak), assigned values of (5, 4, 3, 2, 1), respectively, with reverse scoring applied to negative items (1, 2, 3, 4, 5). The total score on the scale ranges from (36 to 180), with a hypothetical average of (108) points.

2.4 Application of the Two Scales

The researchers applied the two scales in their final form to a sample of 128 physical education and sports sciences students. The respondents were given a questionnaire for both the psychological stability scale and the English language competency skills scale, along with instructions on how to answer each item. The confidentiality and sincerity of the responses were emphasized, with the assurance that the data would be used solely for scientific research purposes. The application period for each scale was from (November 24, 2024) to (November 29, 2024), with an average completion time of (19) minutes per individual, ranging between (18–20) minutes.

3. Results and Discussion

To achieve the objectives of the current research, the two research instruments were administered to a sample of 128 students from the Department of Physical Education and Sports Sciences at the University of Kirkuk. Statistical analyses were then conducted on the obtained data to derive the results, which will be presented and discussed in accordance with the research objectives. To ensure methodological rigor, it was essential to perform statistical analyses to examine the distribution characteristics of the data obtained through the measurement tools used in the study. Accordingly, the researchers subjected the collected data to statistical analysis, aiming to assess the statistical distribution of the data, as well as the normality and abnormality of the distribution. This process helps in selecting appropriate statistical tests and enhances the reliability of the results derived from the study. Tables (15) and (16) demonstrate this.

Table 15. *The characteristics of the statistical distribution of the data.*

	Psychological Stability		English Competency	
Statistical Features	Statistical Values	Standard Error	Statistical Values	Standard Error
Mean	118،625	0،825	96،835	0،806
Median	119،000		97،000	
Mode	100،00		98.00	
Standard Deviation	9.344		11،122	
Variance	87،323		83،225	
Range	5٠،00		48،00	
Skewness Coefficient	−0،164	0،214	−0،062	0،214
Kurtosis Coefficient	0،٠89	0،425	0،194	0،425

Table 16. The results of the normal and abnormal distribution of the data

Psychological Stability Scale					
Shapiro-Wilk			Kolmogorov-Smirnova		
Statistical Measures	Sample	p-value	Statistical Measures	Sample	p-value
0،993	128	0،859	0،53	128	0،200
English Competency Scale					
Shapiro-Wilk			Kolmogorov-Smirnova		
Statistical Measures	Sample	p-value	Statistical Measures	Sample	p-value
0،775	128	0،993	0،051	128	0،188

3.1 Psychological Stability and English Language Competency Scale

The development of both psychological stability and English language competency scales, along with the achievement of these objectives have been addressed in chapter two of this study.

3.2 Psychological Stability Level

To determine the level of psychological stability, the scale was administered to the sample group, and the students' responses were analyzed based on the provided answer options. The results revealed an arithmetic mean of 118.625 with a standard deviation of 9.344. When this mean was compared to the hypothetical mean of 114 using a one-sample T-test, the calculated T-value (14.983) was found to be greater than the critical T-value (1.980) at a significance level of 0.05, with 127 degrees of freedom. This indicates a statistically significant difference between the two means, favoring the arithmetic mean. This finding suggests that the students exhibit a high level of psychological stability. The results are summarized in Table (17).

Table 17. T-test results for the difference between the arithmetic mean and the hypothetical mean of psychological stability level

Statistical Measures	Arithmetic Mean	Standard Deviation	Hypothetical Mean	T-value		N	df	Sig.
				Estimated	Critical			
Psychological Stability	118،625	9،344	114	14،983	1،980	128	127	Significant

The researchers emphasize that psychological stability is a crucial factor in enhancing academic achievement, particularly in physical education disciplines, which require a balance between academic and physical demands. A stable psychological environment fosters students' cognitive and creative abilities, allowing them to utilize their energies more efficiently.

The role of psychological balance extends beyond merely alleviating stress; it also involves developing the capacity to effectively address academic challenges. Establishing a comprehensive psychological support system and encouraging social and physical activities represent significant investments in the development of students' personalities. Psychologists Cleveleen, Rogers, and Maslow argue that psychological stability hinges on an individual's ability to organize their experiences and shield themselves from stress by overcoming weaknesses and fostering positive behaviors (Khamis & Habib, 2017: 286).

3.3 English Language Competency Level

To assess the level of English language competency, the scale was administered to the sample group, and the students' responses were analyzed based on the provided answer options. The results revealed an arithmetic mean of 96.835 with a standard deviation of 11.122. When this mean was compared to the hypothetical mean of 108 using a one-sample T-test, the calculated T-value (1.922) was found to be lower than the critical T-value (1.980) at a significance level of 0.05, with 127 degrees of freedom. This indicates that the difference between the two means is not statistically significant. Consequently, the result suggests that students have a low level of English proficiency. The findings are summarized in Table (18).

Table 18. T-test results for the difference between the arithmetic mean and the hypothetical mean of English language competency level

Statistical Measures	Arithmetic Mean	Standard Deviation	Hypothetical Mean	T-value		N	df	Sig.
				Estimated	Critical			
English language competency	96،835	11،122	108	1،931	1،980	128	127	Not significant

The researchers assert that inadequate language acquisition among physical education students represents a complex educational issue that extends beyond individual capabilities. The sports specialization is marked by a methodological specificity that significantly impacts the language skills of students.

The primary issue lies in an educational system that places excessive emphasis on the practical and physical aspects, thereby marginalizing the academic and linguistic dimensions. Furthermore, the curriculum lacks integrated teaching strategies that naturally and effectively incorporate English into the broader academic context. A significant barrier to language acquisition is the students' low motivation to learn English, as they perceive it as a subject of little future relevance. The teacher's role transcends traditional instruction and includes psychological stimulation, emphasizing the importance of English in their professional careers, particularly for those pursuing physical education (Mariia et. al., 2023)

While the curriculum covers fundamental language skills, the limited teaching time necessitates the selection of effective teaching strategies that maximize the use of available resources. The researchers stress the importance of adopting a comprehensive and thoughtful approach to teaching English to physical education students. This approach should move beyond traditional methods, focusing on student motivation and highlighting the role of language in their future careers. The central challenge is the inadequate educational content, which is misaligned with the practical needs of students, making language learning appear secondary and contributing to a gap in their ability to communicate scientifically.

3.4 Correlation Between Psychological Stability and English Language Competency

To achieve this objective, the Pearson correlation coefficient was used to analyze the relationship between the total scores obtained by the sample, which consisted of 128 students from the Department of Physical Education and Sports Sciences at the University of Kirkuk, on the psychological stability and English language competency scales.

The results of the statistical analysis revealed that there was no significant relationship between psychological stability and English language competency, as the calculated correlation coefficient was 0.173. This value is statistically insignificant, as it is lower than the tabular correlation coefficient value of 0.232 at the 0.05 significance level with 126 degrees of freedom. This is summarized in Table (19).

Table (19). The significance of the correlation (t) between psychological stability and English language competency

Study Variables	Calculated correlation coefficient	Tabular correlation coefficient	df	Sig.
Psychological Stability	0،173	0،232	126	Not significant
English Language Competency				

Table (19) shows that there is no significant relationship between psychological stability and English language competency skills among students in the Department of Physical Education and Sports Sciences at the University of Kirkuk.

Teaching English to physical education students presents a significant challenge: students' low motivation and lack of awareness regarding the importance of language in their future careers. This necessitates that the teacher plays a pivotal role in psychologically motivating students and emphasizing the strategic value of language. Although the curriculum includes basic language skills, the limited time available requires the development of effective teaching strategies. The absence of specialized language programs in the field of sports further hold off language achievement, leading to a gap in scientific and academic communication at the international level.

These challenges highlight the difficulty of learning English within the classroom, where the traditional teacher-centered approach predominates. This method results in a marked decline in student engagement and interaction, as there are fewer opportunities for students to express their opinions and discuss language needs specific to their majors. This issue is particularly pronounced in their fields of work, where students need to practice the language in practical and professional contexts related to their future careers (Al-Yahyai, 2021).

The application of modern educational strategies in teaching English to physical education students presents several fundamental challenges, as noted by Al-Ramadneh (2021). These challenges include the dominance of traditional thinking, which asserts that ideal education can only be achieved through direct instruction from teacher to student. Additionally, the negative attitudes of some departments and colleges towards modern teaching methods present further obstacles. The limited time available for lectures complicates the implementation and assessment of interactive activities, making them difficult to incorporate effectively. Furthermore, difficulties in managing lectures and group dynamics during interactive activities add to the complexity of the situation. Moreover, some faculty members remain unconvinced of the effectiveness and feasibility of these modern methods.

In light of these challenges, it can be argued that the development of English language teaching for physical education students requires the provision of an interactive learning environment that enhances student participation in the educational process. This can be achieved by adopting cooperative learning strategies that allow students to actively engage in the development of their skills and knowledge.

The current study concurs with Romanchuk and Danilevich's (2020), who assert that English is often perceived as unnecessary in physical education, resulting in a decline in students' motivation to study it. Many students believe that English will not be relevant to their careers, making it essential for the teacher to provide motivation and a clear explanation of the importance of English in enhancing their professional paths.

Although the curriculum mandates the acquisition of all four language skills, the limited study hours may hinder the full achievement of this goal. Therefore, teaching priorities should focus on communicative skills, particularly speaking skills, as professional activities in the field of physical education and sports heavily rely on communication, including training, education, and participation in international teams.

Nastas (2017) highlights that learning the language of sport is not simply about memorizing terms, but also involves understanding the connections between words and terms, as well as developing the ability to comprehend texts. It is necessary to acquire both morphological and syntactic structures in addition to specialized terminology.

4. Conclusion and Recommendations

Based on the findings of this study, the researchers have drawn the following conclusions:

i. The results indicate that students in the Department of Physical Education and Sports Sciences at the University of Kirkuk exhibit a high level of psychological stability.
ii. The findings also reveal that these students demonstrate a low level of English language competency.
iii. Furthermore, statistical analysis showed no significant correlation between psychological stability and English language competency.

In light of the research findings, the researchers propose the following recommendations:

i. Enhancing the competitive educational environment through incorporating digital platforms to facilitate dynamic educational competitions, fostering a spirit of competition and reducing student disengagement. This transformation can make the learning process more enjoyable and interactive, providing immediate feedback and motivation.
ii. Promoting cooperative learning through technology by utilizing technology to support remote group projects, allowing students to actively engage in collaborative learning experiences. This approach enhances communication and teamwork skills within an inclusive and safe educational setting.
iii. Improving language skills through interactive methods by organizing virtual conversations with native speakers, integrate artificial intelligence tools for translation and pronunciation practice, and establish digital communities for language exchange. These strategies can help students develop practical language skills in a more immersive environment.

iv. Developing a specialized curriculum which can be achieved through reassessing the current methods of English language instruction in sports disciplines, with an emphasis on specialized language skills that align with students' academic and professional needs. A targeted curriculum can better prepare students for real-world applications in the field of physical education and sports sciences.

The overarching goal is to transform English language learning from a traditional, passive process into an interactive and engaging experience that aligns with the needs of learners.

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