

### Research Article

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### Differences in stress levels between Albanian and German students

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#### **Abstract**

This study was conducted to determine and compare the factors influencing the increase in stress levels of students at German and Albanian universities. In addition to descriptive statistics to analyze the data, the authors used factor analysis, the Independent Samples t-Test, and bivariate correlation among others in the study. An online questionnaire divided into three sections was used as a tool for data collection. The description of statistics expressed in percentages and the data analysis were performed using SPSS software, Version 16. The results showed that students experienced a high level of stress, 44.1214, with some variations among them. The results confirmed a higher level of stress among Albanian students compared to German students. On the other hand, the results indicated that the "Fear of failing exams" factor had a greater impact on increasing stress levels among German students compared to Albanian students.

**Keywords:** academic stress, failure, attendance, employment, stress level.

#### 1. Introduction

Academic stress is one of the major causes of stress, anxiety, and depression among university students. It occurs when a set of study-related demands exceeds the student's existing abilities to manage and adapt to these demands. This includes mental suffering related to expected academic challenges or failure, or even the fear of the possibility of academic failure. To better understand the differences in stress experiences between German and Albanian students, it would be useful to conduct further research comparing their specific experiences. This could include factors such as cultural, socioeconomic differences, and the different teaching and learning methods in these two countries. Stress is a major issue for students and can significantly impact their academic performance and overall well-being. Studies comparing the stress level among students from different universities could be useful in understanding how the university environment and its policies affect student stress. This could help universities improve their programs and policies to better assist students in managing stress. A considerable number of research studies have been conducted to explore the correlation of stress factors. Literature review shows that there are not many studies comparing the stress level of students from one university to the stress levels of students from other universities. Therefore, it is time to conduct research on this specific issue where the beneficiaries are the students themselves and the universities in planning and designing relevant programs for students in order to reduce stress factors.

### 2. Research Analysis

This study aims to find out if there is any significant difference in the level of perceived stress among German and Albanian students. One of the objectives of this study is to identify and compare which factors have a greater impact on German students and which factors influence the stress level of Albanian students more significantly. Specifically, the study aims to answer the following research questions:

- 1. Is there a significant difference in the levels of experienced stress between Albanian and German students?
- 2. Which specific factors contribute most significantly to the elevation of experienced stress levels in Albanian students, and which factors are most influential in elevating the experienced stress levels among German students?

Based on the literature, the study seeks to validate the main hypothesis:

H1: There are differences in the experienced stress between students at Albanian and German universities.

The study also aims to analyze some other hypotheses that are very important to shed light on this significant phenomenon in university campus environments.

H2: Class attendance impacts the escalation of stress levels among students.

H3: Fear of exam failure plays a critical role in the elevation of students' stress levels.

H4: Employment status is a major determinant in the increase of stress levels for students.

The methodology section used in this study is described step by step based on the objectives of the study, the analysis of results. All findings and implications of the results are discussed, and the necessary recommendations are presented.

#### 3. Literature review

Not all experts in the field of stress research concur on the significance of the term 'stress.' Lazarus (1966) defines stress as a concept utilized to comprehend essential phenomena in the adaptation processes of humans and animals. Rudland, Golding, & Wilkinson (2020) employ the term 'stressor' to denote an anticipatory aspect in education that may be perceived as either a constructive challenge or an obstacle. The outcome, whether positive or negative for learning, hinges on the individual's

response to and interpretation of the stressor.

According to Anbumalar, Dorathy, Jaswanti, Priya, & Reniangelin (2017), stress is a physiological mechanism that protects people from danger, but continuous exposure to stress hormones can lead to physical and psychological illnesses. Academic stress, which pervades the lives of students, tends to negatively affect their mental and physical health and their ability to perform schoolwork effectively. The transition of students from high school to university also triggers a number of stressful circumstances.

Research has found that students experience stress due to financial issues, exam pressures, and feelings of low self-esteem. In their study, Anuradha, Dutta, Raja, Sivaprakasam, & Patil (2017) discovered that females exhibit higher stress levels than males. However, males, according to Anbumalar et al. (2017), possess better strategies for coping with stress; Stress levels are highest among final-year medical students and those of older age groups. According to Tangade, Mathur, Gupta, & Chaudhary (2011), stress increases with each year of study, and males experience more stress than females. In their research, Geng, G., & Midford, R. (2015) found that first-year students experience higher levels of stress compared to students in subsequent years. Stress factors include academic engagement, employment evaluations, a lack of a clear understanding of the teaching profession, and conflicting work and family commitments. The study revealed that first-year students lack sufficient institutional support. According to Backović, Živojinović, Maksimović & Maksimović (2012), medical students towards the end of their studies experience high psychological distress, highlighting the need for promoting mental health from the beginning of their academic journey. Their mental health issues may stem from unresolved roots. In a study conducted by Youssef and Goodrich (1996), the results indicated that accelerated nursing students experienced higher levels of stress and maintained higher average grades compared to traditional students. Stress levels increase at the beginning of the semester and before final exams.

There is less known about differences in stress levels when comparing undergraduate and graduate students. The study by Ickes, Brown, Reeves, and Zephyr (2001) found no significant differences in stress levels between undergraduate and graduate students. Although undergraduate and graduate students experience stress similarly, social support was more likely among graduate students and may be an important strategy for future college health programs.

Students fear failing exams, and this fear is the most common source of academic stress. Exam anxiety negatively affects student performance, and fear of failure is a stress factor (Fisher, 1994). Various studies have found that exam stress impacts student performance. High-stakes exams, according to Heissel, Adam, Doleac, Figlio, & Meer (2001), affect students' cortisol responses, which has consequences for test performance. In their study, Kumari and Jain (2014), and Ahmad, Gul, and Zeb (2022) found that students experience high stress due to lack of preparation, study style, lack of necessary information, study pressure, time management, teacher behavior, sense of competition, and study material. When this stress is perceived negatively or

becomes excessive, it leads to anxiety before and during exams, affecting students' academic achievements. It is generally considered that stress has a negative effect on academic performance. However, the findings of the study by Kumari & Gartia (2012) reveal a positive relationship between stress and academic achievements, not offering additional support for the often-observed negative relationships between stress and the academic achievements of adolescents or students.

Another health-related factor that may impact a student's average grade is class attendance. Class participation can be associated with stress factors such as insufficient sleep, work responsibilities, illnesses, and also familial obligations or childcare.

Studies have revealed that university students experienced high levels of stress and depression during the COVID-19 pandemic, especially concerning employment (Peng, Lv, Low, & Bono, 2023) and their future careers (Chowdhury, Suvro, Farhan, & Uddin 2022). Female students and those who perceive the employment situation as severe are more stressed and depressed. The studies underscore the need for mental health programs for students (Chowdhury et al., 2022) and support (Ergün & Şeşen, 2021) to enhance their employability, highlighting the importance of soft skills, academic performance, personal circumstances, and the external job market.

The study by Misra & Castillo (2004) found that international students reported lower academic stress and fewer reactions to stressors than American students. American participants reported a statistically higher level of academic stress from self-imposed stress. This was an unexpected finding. American participants perceived higher academic stress from pressure and conflict. Hierarchical analyses showed that status influences reactions to stressors and contributed to the difference in behavioral, emotional, and physiological reactions to stressors.

# 4. Stress Sources among German and Albanian Students

The sources of stress vary and are connected to both academic and personal environments. In Germany, university students have reported different experiences of academic stress. For instance, a study indicated that during the summer semester of 2020, German students experienced lower levels of stress and higher levels of enjoyment compared to previous academic semesters. This could be attributed to changes in academic and non-academic workload or reduced demands in university exams. The German Student Union Social Survey (Neuderth, Jabs & Schmidtke 2009) estimated that about 15-20% of student functioning is impeded by exam nerves on a "moderate" to "high" scale. However, a study in Germany suggested testing the validity and reliability of the Perceived Stress Scale (PSS-10) among native Germans and residents with migration backgrounds, indicating possible differences in stress experiences among various ethnic groups.

Recent research by Tsiouris, Werner, Tibubos, Mülder, Reichel, Heller & Beutel (2023) showed that German students experience stress as a result of neglecting hobbies, not meeting with family and friends, canceling or postponing medical appointments, and the need for psychological support. Another study found that about 44% of students in Germany often feel stressed by their studies or personal lives<sup>1</sup>. Yet another study

 $<sup>^{1}\,\</sup>underline{\text{https://www.statista.com/statistics/1400307/stress-studies-personal-life-students-germany/}$ 

discovered that about 92% of female students in Germany reduce stress by meeting friends and family². The research conducted by Goppert and Pfost (2011), based on a sample of 110 German university students, investigated whether perceived stress levels in the summer semester of 2020 differed from previous academic semesters. The results showed lower levels of stress and higher levels of enjoyment in the summer semester of 2020 compared to previous semesters, with potential explanations discussed, such as changes in academic and non-academic workload or reduced exam demands.

On the other hand, there is limited information regarding the experience of Albanian students with academic stress. Regarding the stress sources of Albanian students, recent research by Pilika & Simaku (2017) found that Albanian students experience symptoms of depression, anxiety, and stress. Females, students from rural areas, and married individuals scored higher for symptoms of depression, anxiety, and stress. Another study (Prifti & Rapti, 2018) discovered that stress is a significant barrier to good academic performance. There is a correlational relationship between academic success and tranquility. A UNICEF report revealed that children and families in Albania are still under significant stress, and the well-being of children and adolescents is negatively impacted by multiple factors, including loss of learning, isolation, reduced household income, and increased non-monetary deprivations<sup>3</sup>. These stress sources can affect students' academic performance and their overall well-being.

## 5. Study methodology

Given the research question of whether there are differences in stress levels between German and Albanian students, based on the objectives and the nature of the data planned for collection and analysis, a comparative or cross-sectional study design was deemed appropriate for this research. The design involved the development and psychometric evaluation of a scale that measures the perceived sources of academic stress among university students. To compare stress levels between German and Albanian students, researchers introduced a new variable "nationality" through the Compute Variable method. The "Nationality" variable was structured as a categorical (discrete) variable. The "Level of Study" variable was considered an independent categorical variable, while the "Stress Level" (SL) was structured as a continuous and dependent variable. Through factor analysis, the study identified three main factors characterizing the sources of academic stress among university students.

## 5.1 Participants

The population of this study encompasses German and Albanian students. For the selection of a representative sample of students from each student group, the simple random sampling method was utilized via an online survey. The sample of this study

<sup>&</sup>lt;sup>2</sup> Ways students reduce stress Germany, by gender | Statista

<sup>&</sup>lt;sup>3</sup> https://www.unicef.org/media/115791/file/Albania-2021-COAR.pdf

includes students from both German and Albanian universities, covering males, females, and others. In total, 173 students participated in this study, among which 147 were male (85%), 24 female (13.9%), and 2 others (1.2%). The data reveals that 113 students, or 65.3%, are pursuing their master's degree.

#### 5.2 Measurement Instruments

In this comparative study, to measure and compare the stress levels between the two student groups, the same instrument was utilized, specifically an online questionnaire divided into three sections:

The first section required students to report demographic data, including gender, level of study, and the university of attendance. The second section utilized the Perceived Stress Scale (PSS 14) developed by Cohen, Kamarck, & Mermelstein (1983) to measure stress levels. This scale consists of 14 questions related to stress perception. The PSS 14 scores are obtained by reversing the scores for six negative items and then summing up all items. Individual PSS 14 scores can range from 14 to 70, where a low score indicates a low level of stress perception, and conversely, high scores indicate a high level of stress perception. Students responded to the Likert scale (PSS 14) questions with 5 categories ranging from 1) Never, 2) Almost never, 3) Sometimes, 4) Quite often, and 5) Very often. The third section identified factors influencing the level of experienced academic stress. Students responded to 36 Likert scale questions with 5 categories, ranging from "no influence" to "extremely influential."

This research method provides a structured and self-administered way to collect data and find study results.

#### 5.3 Procedure

Researchers distributed a self-administered questionnaire online via *Google Forms* for data collection. After verifying the responses provided by the students, researchers concluded that 173 respondents had accurately completed all items included in it. To carry out the study task and shed light on the hypotheses, this study was structured in several phases. After determining the survey format and compiling the items to be included in the instrument, other procedural phases followed, such as: building a database in SPSS; processing and interpreting the data.

### 5.4 Data Analysis

Descriptive analysis was performed, with the average calculated for continuous variables and the number or percentage for categorical variables. To test the hypothesis (H1), researchers used the Independent-Samples t-Test for Comparing Means of Independent Groups. To answer the research question of which of the three factors most influence the stress level of German and Albanian students, the Independent-Samples t-Test for Comparing Means of Independent Groups was used.

To test hypotheses (H2), (H3), and (H4), Pearson's Product-Moment Correlation Coefficient was employed. Factor analysis was used in this study to observe the loadings of variables and the relationship between them. The 36 variables (items) of the third session scale were loaded and analyzed by SPSS software, Version 16, through factor analysis. Factor analysis utilized the Extraction Method: Principal Component Analysis, and the Rotation Method: Varimax with Kaiser Normalization.

#### 6. Results

## 6.1 Results of the First Section

The findings from the descriptive analysis (Table 4.1) indicate that the gender variable encompasses three different values: Male (M), Female (F), and Other (T). In total, 147 students (85%) were male, 24 students (13.9%) were female, and 2 students (1.2%) did not specify their gender.

Table 4.1 Gender									
		Cumulative							
		Frequency	Percent	Valid Percent	Percent				
Valid	M	147	85.0	85.0	85.0				
	F	24	13.9	13.9	98.8				
	T	2	1.2	1.2	100.0				
	Total	173	100.0	100.0					

The descriptive analysis results for the level of study variable reveal four distinct values: First-Year Bachelor, Second-Year Bachelor, Third-Year Bachelor, and Master's Level. Out of the total participants, 6 students (3.5%) were in their first year of Bachelor's studies, 23 students (13.3%) were in their second year, 31 students (17.9%) were in their third year, and 113 students (65.3%) were enrolled in a Master's program.

Table 4.2 The Level of Study

					Cumulative
		Frequency	Percent	Valid Percent	Percent
Valid	First-Year Bachelor	6	3.5	3.5	3.5
	Second-Year Bachelor	23	13.3	13.3	16.8
	Third-Year Bachelor	31	17.9	17.9	34.7
	Master	113	65.3	65.3	100.0
	Total	173	100.0	100.0	

The descriptive statistical analysis results show that the "University" variable comprises four distinct values: University of Tirana, University of Cologne in Germany, University of Vlora "Ismail Qemali", and University of Berlin. Among the total participants, 59 students (34.1%) were from the University of Tirana, 53 students (30.6%) from the University of Cologne in Germany, 50 students (28.9%) from the

University of Vlora "Ismail Qemali", and 11 students (6.4%) from the Technical University of Berlin.

Table 4.3 University

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	University of Tirana	59	34.1	34.1	34.1
	University of Cologne, Germany	53	30.6	30.6	64.7
	University of Vlora "Ismail Qemali"	50	28.9	28.9	93.6
	Technical University of Berlin	11	6.4	6.4	100.0
	Total	173	100.0	100.0	

#### 6.2 Results of the Second Section

Statistical and Descriptive Analysis Results. The central tendency measurement was calculated to summarize the data for the Stress Level (SL). The distribution measurement was computed to understand the variability of results for the SL variable, where N=173,  $\mu$  (mean) = 44.1214, SD (standard deviation)  $\sigma=7.48815$ . Therefore, the descriptive analysis of the SL scale indicates that students have experienced a high level of stress. The scores of the Perceived Stress Scale (PSS 14) range from 14 to 70. In our study, it was found that the minimum stress level score is 22, and the maximum is 65. Thus, the stress level of the individuals studied varies from 22 to 65. The results of the descriptive statistics (Table 4.4), based on the data, show that there is a wide distribution of stress levels among students, where some experience low levels of stress, while others experience very high levels of stress. The standard deviation in the study indicates that there is moderate variation in the stress level among the individuals studied. The mean and standard deviation suggest that the distribution of stress levels is relatively stable. This means that most students experience a stress level around the group's average.

Table 4.4

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Stress Level	173	22.00	65.00	44.1214	7.48815
Valid N (listwise)	173				

### Reliability Analysis of the PSS 14 Scale

The study conducted a reliability test using Cronbach's Alpha for the PSS 14 scale. The Cronbach's Alpha value for the scale was ( $\alpha$  = .763), rounded to 0.8, with 14 items, indicating that the internal consistency of the scale is very good. This confirmed that the reliability of the various items on the scale reached the level required by evaluation standards (Table 4.5)

Table 4.5

Reliability Statistics

Cronbach's Alpha N of Items
.763 14

### 6.3 Results of the Third Section

The results showed that the Kaiser-Meyer-Olkin Measure of Sampling Adequacy was (KMO = .868) > 0.6 , indicating an excellent value for sampling adequacy. Bartlett's Test of Sphericity equaled a Chi-Square, demonstrating that (Sig) = .000, meaning (p < .005). This confirms the standardization of the test used for data collection and that the questionnaire i s statistically significant (Table 4.6). The final step of the factor analysis was the evaluation of grouped factors according to loadings into 3 (three) factors. The study assessed the preservation of strong factors. Consequently, it was considered that a factor with fewer than 5 items is generally a weak and unstable factor and was not taken into account. Factors with 5 or more items with strong loadings ( $\geq$  .30) were accepted as desirable and indicative of a strong factor (Costello and Osborne 2005). Only variable 36 with a loading < .30 was excluded from further statistical analysis.

Table 4.6
Table 4.4 KMO and Bartlett's Test

Table 4.4 KWO and Bartiett 5 Test						
Adequacy.	n Measure of Sampling	.868				
Bartlett's Test of Sphericity	Approx. Chi-Square	3420.485				
	df	630				
	.000					

### Total Variance Explained

By analyzing the factors extracted from the analysis with their Eigenvalues, the percentage of variance attributed to each factor, and the cumulative variance, we observe that; the first factor accounts for 30.904% of the variance; the second factor accounts for 8.649% of the variance; the third factor accounts for 6.515% of the variance. Altogether, these three factors explain 46.067% of the variance. The factor analysis yielded three significant factors: *Factor 1*. Class attendance (13 items), *Factor 2*. Fear of failing exams (14 items), *Factor 3*. Employment (8 items). The study applied Cronbach's Alpha reliability test for the three factors extracted from the factor analysis.

Factor 1. Class Attendance (CA), with 13 items, includes: oversleeping, insomnia, inaccurate self-assessment, biased tests, poor time management, high demands from teachers, parental expectations, etc. (Table 4.7).

Table 4.7

Reliability Statistics					
Cronbach's Alpha	N of Items				
.908	13				

Factor 2. Fear of Failing Exams (FFE), with 14 items, includes: overload, lack of technology, concern about the future, exams, lack of activities, etc. (Table 4.8).

Table 4.8

Reliability Statistics					
Cronbach's Alpha	N of Items				
.870	14				

Factor 3. Employment (E), with 8 items, includes: part-time and full-time employment, financial difficulties, being a student parent, poor-quality food, etc. (Table 4.9)

Table 4.9

Reliability Statistics						
Cronbach's A	Alpha	N of Items				
	.837	8				

## 6.4 Results for Hypothesis 1

H1: There are differences in the experienced stress between students at Albanian and German universities. The Independent-Samples t-Test, a parametric test comparing the average stress level of German and Albanian students (as shown in "Group Statistics" Table 4.10), reveals that 64 German students experienced an average stress level of  $\mu$  = 42.0938, with a standard deviation of ( $\sigma$  = 8.05481) and a standard error of the mean (S.E.M) = 1.00685. Similarly, 109 Albanian students experienced an average stress level of  $\mu$  = 45.3119, with a standard deviation of  $\sigma$  = 6.89833 and a standard error of the mean (S.E.M) = .66074.

Table 4.10 The averages of (SL) among German (G) and Albanian (A) students.

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Group	า ราล	TISTICS

	Nationality	N	Mean	Std. Deviation	Std. Error Mean
Stress Level	German students	64	42.0938	8.05481	1.00685
	Albanian Students	109	45.3119	6.89833	.66074

Levene's Test for Equality of Variances (Table 4.11) was used to verify the assumption that the variances of the two groups are equal. In this case, the significance level value (Sig) is .202, which is greater than .05, thus (Sig) = .202); (p > .05). This indicates that the variances in the two groups of German and Albanian students are equal. Therefore,

we can use the first row of the t-Test results. In the "Equal variances assumed" row, the t-value is -2.782 with 171 degrees of freedom (df = n-2). The significance level (Sig) is .006, which is less than .05. Therefore, t(171) = -2.782, is significant at (Sig). (2-tailed) = .006); thus (p < .05). This means there is a statistically significant difference between the averages of the two groups, and we should reject the null hypothesis. The difference in means between the groups is -3.21818. The 95% Confidence Interval gives us an estimate of the actual difference in the population between the groups. We can be 95% confident that the actual difference in the stress experienced by German and Albanian students lies somewhere between -.93478 and -5.50157.

Table 4.11. Levene's Test

	Independent Samples Test									
		Leve Test Equali Varia	for ity of			t-test fo	r Equality of	Means		
		F	Sig.	t	df	Sig. Mean Std. Error Interval (2-tailed) Difference Difference Difference Lower		of the		
Stress Level	Equal variances assumed	1.637	.202	-2.782	171	.006	-3.21818	1.15677	-5.50157	
	Equal variances not assumed			-2.672	116.35845	.009	-3.21818	1.20430	-5.60336	83300

**Results for the Research Question:** Which factors significantly contribute to the increase in stress levels among Albanian students, and which factors predominantly influence the elevation of stress levels among German students?

Impact on Stress Level from F1: Class Attendance (CA)

The Group Mean Statistics Table (Table 4.12) provides descriptive statistics for each group by reading through each row; the sample size (N), the mean ( $\mu$ ), standard deviations ( $\sigma$ ), and the standard error of the mean (S.E.M) for the continuous variable (F1), separated for each group. In our study, 64 German students experienced an average impact level on the stress level of F1  $\mu$  = 40.6250, with a standard deviation ( $\sigma$  = 10.98989) and a standard error of the mean (S.E.M) = 1.37374. Similarly, 109 Albanian students experienced an average impact level on the stress level of F1 ( $\mu$  = 40.8624), with a standard deviation ( $\sigma$  = 11.91752) and a standard error of the mean (S.E.M) = 1.14149.

Table 4.12 The Group Mean Statistics of (SL) under the influence of F1.

Group Statistics							
	Nationality	N	Mean	Std. Deviation	Std. Error Mean		
F1. Class attendance	German students	64	40.6250	10.98989	1.37374		
	Albanian Students	109	40.8624	11.91752	1.14149		

Levene's Test for Equality of Variances was applied to verify if the variances of the two groups are comparable (Table 4.13). The significance level (Sig) turned out to be .348, surpassing the threshold of .05, indicating (Sig) = .348; (p > .05). This suggests that the variance within the groups of German and Albanian students does not differ significantly. Consequently, we can refer to the initial row of the t-Test findings. Under the "Equal variances assumed" condition, the t-value is -.130 with 171 degrees of freedom (df = n-2). The significance level (Sig) stands at .897, which is above .05, indicating t(171) = -.130 is not statistically significant at (Sig) (2-tailed) = .897; (p > .05). Therefore, it implies there isn't a statistically significant difference in the average stress levels influenced by F1 between the two groups, leading us to retain the null hypothesis. The mean difference between the groups is -.23739. The 95% Confidence Interval offers an estimation of the actual variance between the groups in the population. With 95% confidence, the actual variance in stress levels influenced by F1 between German and Albanian students is estimated to be within the range of 3.36364 and -3.83841.

Table 4.13
Independent Samples Test

		Levene for Eq	uality	muc	pendent su					
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Con Interval Differe Lower	of the
F1. Class attendance	Equal variances assumed	.887	.348	130	171	.897	23739	1.82429	-3.83841	
	Equal variances			133	1.40860E2	.894	23739	1.78610	-3.76841	3.29364

Impact on Stress Level from F2: Fear of Failing Exams (FFE)

In this study, as indicated in the Group Statistics Table (Table 4.14), 64 German students experienced an average impact level on stress from F2 ( $\mu$  = 43.2344), with a standard deviation ( $\sigma$  = 9.37870) and a standard error of the mean (S.E.M) = 1.17234. Similarly, 109 Albanian students experienced an average impact level on stress from F2 ( $\mu$  = 34.1193), with a standard deviation ( $\sigma$  = 9.98955) and a standard error of the mean (S.E.M) = .95683.

Table. 4.14. The Group Mean Statistics of (SL) under the influence of F2.

	Nationality	N	Mean	Std. Deviation	Std. Error Mean
F2. Fear of Failing Exams	German students	64	43.2344	9.37870	1.17234
	Albanian Students	109	34.1193	9.98955	.95683

Levene's Test for Equality of Variances was employed to test the assumption that the variances between the two groups are equal (Table 4.15). In this instance, the significance level (Sig) is .508, which is greater than .05, indicating (Sig) = .508; (p > .05). This suggests that the variances between the groups of German and Albanian students are comparable. Consequently, we can reference the initial row of the t-Test results. Under the "Equal variances assumed" category, the t-value is 5.925 with 171 degrees of freedom (df = n-2). The significance level (Sig) is .000, which is less than .05. Thus, t(171) = 5.925, is significant at the level (Sig). (2-tailed) = .000; (p < .05). This indicates a statistically significant difference between the mean scores of the two groups, and the null hypothesis must be rejected. The mean difference between the groups is 9.11511. The 95% Confidence Interval provides an estimate of the actual difference between the groups in the population. We can be 95% confident that the actual difference in the stress levels under the influence of F2 between German and Albanian students lies somewhere between 12.15180 and 6.07842.

Table 4 15

	Table 4.15									
				Indep	endent Sar	nples Test				
		Leve Test Equal Varia	for ity of	_		t-test f	or Equality	of Means		nfidence l of the
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Diffe Lower	rence Upper
F2. Fear of Failing Exams, 14 items	Equal variances assumed	.440	.508	5.925	171	.000	9.11511	1.53839	6.07842	12.15180
	Equal variances not assumed			6.024	138.927	.000	9.11511	1.51324	6.12315	12.10706

*Impact on Stress Level from F3: Employment (E)* 

In our study, as shown in the Group Statistics Table (Table 4.16), 64 German students experienced an average impact level from F3 ( $\mu$  = 22.1406), with a standard deviation ( $\sigma$  = 8.62051) and a standard error of the mean (S.E.M) = 1.07756. Similarly, 109 Albanian students experienced an average impact level from F3 ( $\mu$  = 23.5229), with a standard deviation ( $\sigma$  = 7.30499) and a standard error of the mean (S.E.M) = .69969.

Table. 4.16. The Group Mean Statistics of (SL) under the influence of F3
Group Statistics

	Nationality	N	Mean	Std. Deviation	Std. Error Mean
F3. Employment	German students	64	22.1406	8.62051	1.07756
	Albanian Students	109	23.5229	7.30499	.69969

Levene's Test for Equality of Variances was applied to assess whether the variances of the two groups are equal (Table 4.17). The significance level (Sig) turned out to be .025, which is less than .05, hence (Sig) = .025; (p < .05). This indicates that the variances for the German and Albanian student groups differ significantly. As a result, we refer to the "Equal variances not assumed" line of the t-Test results. In this line, the t-value is -1.07590 with 115.361 degrees of freedom (df = n-2). The significance level (Sig) is .284, above .05. Thus, t(115.361) = -1.07590 is not significant at (Sig). (2-tailed) = .284; (p > .05), suggesting no statistical difference in the average scores between the two groups, and the null hypothesis should not be rejected. The mean difference between the groups is -1.38231. The 95% Confidence Interval offers an estimate of the genuine difference in the population between the groups. We can be 95% confident that the actual difference in stress levels influenced by F3 between German and Albanian students falls within the range of 1.16255 to -3.92717.

Table 4.17
Independent Samples Test

				Indep	pendent S	Samples Te	est			
		Levene's Test for Equality of Variances				t-test	t for Equality			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Conf Interval Differe Lower	of the
F3. Employment	Equal variances assumed	5.090	.025	-1.12313	171	.263	-1.38231	1.23076	-3.81176	1.04713
	Equal variances not assumed			-1.07590	115.361	.284	-1.38231	1.28480	-3.92717	1.16255

### **Results for Hypothesis 2.**

 $H_2$ . Class attendance impacts the escalation of stress levels among students.

As shown in Table 4.18, the bivariate correlation between (SL) and F1 Class Attendance (CA) is significant at the .01 level (2-tailed). The Bivariate Correlation Coefficient r = -.311 (weak).

### **Results for Hypothesis 3.**

 $H_3$ : Fear of exam failure plays a critical role in the elevation of students' stress levels.

As observed in Table 4.18, the bivariate correlation between (SL) and F2 Fear of Failing Exams (FFE) is significant at the .01 level (2-tailed). The Bivariate Correlation Coefficient r = -.458 (weak).

### Results for Hypothesis 4.

 $H_4$ : Employment status is a major determinant in the increase of stress levels for students. As shown in Table 4.18, the bivariate correlation between (SL) and F3 Employment (E) is significant at the .05 level (2-tailed). The Bivariate Correlation Coefficient r = -.159 (weak and indeterminate).

Table 4.18 Multivariate Correlation

		Corre	lations		
		Stress Level	F1.Class attendance	exams	F3.Employment
Stress Level	Pearson Correlation	1	311**	458**	159*
	Sig. (2-tailed)		.000	.000	.037
	N	173	173	173	173
F1. Class attendance	Pearson Correlation	311**	1	.674**	.473**
	Sig. (2-tailed)	.000	)	.000	.000
	N	173	173	173	173
F2. Fear of Failing Exams	Pearson Correlation	458**	.674**	1	.436**
	Sig. (2-tailed)	.000	.000		.000
	N	173	173	173	173
F3. Employment	Pearson Correlation	159	.473**	.436**	1
	Sig. (2-tailed)	.037	.000	.000	
	N	173	173	173	173

<sup>\*\*.</sup> Correlation is significant at the 0.01 level (2-tailed).

#### 7. Discussion

**Discussion of Results for Hypothesis 1**: There are differences in the experienced stress between students at Albanian and German universities.

The results of the Independent-Samples t-Test and Levene's Test for Equality of Variances indicate that there are differences in the experience of stress between students at Albanian and German universities. Levene's Test for Equality of Variances shows that the variances between the two groups are equal, as the significance level

<sup>\*.</sup> Correlation is significant at the 0.05 level (2-tailed).

(Sig) is .202, which is greater than .05, thus (Sig) = .202; (p > .05). The t-Test for Equality of Means shows that the significance level (Sig) is .006, which is less than .05, hence (Sig) (2-tailed) = .006; where (p < .05). This means there is a statistically significant difference between the averages of the two groups, and we must reject the null hypothesis. The value (p < .05) confirms that the difference between the two groups is greater than the internal variability (i.e., the difference is statistically significant), indicating that Albanian students have experienced a higher level of stress compared to German students.

**Discussion of Results for the Research Question:** Which factors significantly influence the increase in stress levels among Albanian students, and which factors influence the increase in stress levels among German students more?

Regarding Factor F1, Class Attendance (CA), the statistical analysis shows no significant statistical differences in the impact of (CA) on stress levels between Albanian and German students. The study clearly demonstrates that 64 German students with a respective stress level of  $\mu$  = 40.6250, and 109 Albanian students with a respective stress level of  $\mu = 40.8624$ , have experienced similar average impact levels on stress from (CA). This suggests that the impact of class attendance on stress levels is similar between these two groups of students. Levene's Test results indicate that the variances in the two groups are the same (Sig = .348, p > .05). The t-Test shows no significant difference between the average stress levels influenced by (CA) in both groups (t (171) = -.130, Sig = .897, p > .05), meaning we cannot reject the null hypothesis. Regarding Factor F2, Fear of Failing Exams (FFE), the statistical analysis shows significant statistical differences in the impact of Fear of Failing Exams (FFE) on stress levels between Albanian and German students. The study clearly indicates that 64 German students with a respective stress level of  $\mu$  = 43.2344, and 109 Albanian students with a respective stress level of  $\mu = 34.1193$ , have experienced different average impact levels on stress from (FFE). This suggests that German students have experienced a higher level of stress due to the fear of failing exams (FFE) compared to Albanian students. Levene's Test results show that the variances in the two groups are the same (Sig = .508, p > .05). The t-Test indicates a significant difference between the average stress levels influenced by FFE in both groups (t (171) = 5.925, Sig = .000, p < .05), meaning there is a significant statistical difference between the averages of the two groups, and we must reject the null hypothesis. The findings of the study align with previous findings by Fisher (1994).

Regarding Factor F3, Employment (E): The study found no significant statistical differences in the impact of Employment (F3) on stress levels between Albanian and German students. It is clear from the study that 64 German students with a respective stress level ( $\mu$  = 22.1406), and 109 Albanian students with a respective stress level ( $\mu$  = 23.5229), experienced similar average impact levels on their stress from F3 (E). This is confirmed by Levene's Test and the t-Test, where the p-value is greater than .05, allowing us to retain the null hypothesis.

Thus, it's underscored that the influence of employment on stress levels does not significantly differ between the two groups of students.

**Discussion of Results for Hypothesis 2:** Class attendance impacts the escalation of stress levels among students.

Based on the results, it can be stated that: class attendance has a negative impact on students' stress levels, with a bivariate correlation coefficient r = -.311. This is significant at the .01 level, indicating that the more frequently students attend classes, the less stress they experience.

**Discussion of Results for Hypothesis 3:** *Fear of exam failure plays a critical role in the elevation of students' stress levels.* 

Based on the results, it can be stated that: fear of failing exams has a strong negative impact on students' stress levels, with a bivariate correlation coefficient r = -.458. This is significant at the .01 level, indicating that the greater the students' fear of failing exams, the more stress they experience.

**Discussion of Results for Hypothesis 4**: *Employment status is a major determinant in the increase of stress levels for students.* 

Based on the results, it can be stated that: employment has a weak negative impact on students' stress levels, with a bivariate correlation coefficient r = -.159. This is significant at the .05 level, indicating that employment can influence students' stress levels, but the impact is weak and indeterminate.

#### 8. Conclusions and recommendations

Based on the statistical analysis and interpretation of results, the conclusion for Hypothesis 1 is that there are significant statistical differences in the experience of stress between students at Albanian and German universities. Albanian students have experienced a higher level of stress compared to German students. This conclusion is grounded in the results of the t-Test and Levene's Test, where the p-value is less than .05, allowing us to reject the null hypothesis. Therefore, our alternative hypothesis, H1: "There are differences in the experienced stress between students at Albanian and German universities" holds true. The results indicate a significant difference in the experience of stress between German and Albanian students.

From the statistical analysis and interpretation of results for the research question "Which factors significantly influence the increase in stress levels among Albanian students, and which factors influence the increase in stress levels among German students more?" it is concluded that there are no significant statistical differences in the impact of Factor F1, Class Attendance, on stress levels between Albanian and German students. There are significant statistical differences in the impact of the Fear of Failing Exams on stress levels between Albanian and German students. There are no significant statistical differences in the impact of employment on stress levels between these two groups of students.

Based on the statistical analysis and interpretation of results for H2, H3, and H4, class attendance, fear of failing exams, and employment have different impacts on students' stress levels.

Class attendance and employment have a negative impact on stress levels, but the

impact of employment is weak and indeterminate. The fear of failing exams has a strong negative impact on stress levels. These findings suggest that the more frequently students attend classes, the less stress they experience. Hence, higher class attendance is associated with lower stress levels. However, since the correlation is weak, the impact of class attendance on stress levels is not very strong. Therefore, although class attendance has an effect on stress levels, there are other factors that influence students' stress levels. On the other hand, the more fear students have of failing exams, the more stress they experience. Meanwhile, the impact of employment on stress levels is weak and indeterminate.

Drawing from the findings of previous studies, we would recommend that the assessment and examination system might need reevaluation to reduce stress, according to Anuradha et al., (2017). It's also crucial for higher education institutions to be aware of these issues and offer support for students facing stress.

Drawing from the findings of previous studies, we would recommend that the assessment and examination system might need reevaluation to reduce stress, according to Anuradha et al., (2017). It's also crucial for higher education institutions to be aware of these issues and offer support for students facing stress.

- 1. Improving the assessment and examination system: If the fear of failing exams significantly negatively impacts stress levels, revising the assessment and examination system to reduce stress might be beneficial (Anuradha et al., 2017). This could include alternative assessment methods, such as portfolio-based assessments, or using multiple-choice exams instead of long essays.
- 2. *Increasing class attendance:* If higher class attendance is associated with lower stress levels, students could be encouraged to attend classes more frequently. This could be achieved through attendance policies or by offering learning materials available only in class.
- 3. Supporting working students: If employment has a weak and indeterminate impact on stress levels, providing support for working students might be beneficial. This could include career counseling or time management assistance.
- 4. Raising awareness in higher education institutions: It's important for higher education institutions to be aware of these issues and offer support for students facing stress. This could include providing counseling services or ensuring students have access to resources to help manage stress.

These are just recommendations and should be adapted according to the specific context and needs of students and higher education institutions. Furthermore, it's vital to continue research in this area to learn more about the impact of these and other factors on students' stress.

# **Study Limitations**

This study has several significant limitations that should be taken into account:

1. Focus on Two Specific Populations: The study only includes German and Albanian students. This means that the results might not be generalizable to students in other countries or different cultural contexts.

- 2. Sample Size: The sample selection includes 173 students, representing a small fraction of the student populations in both countries. This could affect the statistical power of the study and the ability to make inferences about the broader population.
- 3. Use of Online Survey: Data was collected through an online survey, which may have influenced participation and data quality. For instance, students without internet access or those uncomfortable with technology might have been excluded.
- 4. Diversity of Students: The study predominantly involved master's students (65.3%). This could impact the ability to make inferences about students at other levels of study.
- 5. Gender Diversity:85% of the participants were male, while only 13.9% were female. This gender imbalance could affect the interpretation of the results and the ability to make inferences about female students.
- 6. Simple Random Sampling Method: This method does not guarantee that the sample is representative of the broader population, as it does not control for specific population characteristics.

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