

# Stage Fright to Scholarly Flight: The Impact of Public Speaking Anxiety and Fear of Negative Evaluation on Academic Performance in University Students

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## Abstract

**Background:** Public speaking anxiety is increasingly prevalent among university students, negatively impacting their academic performance, especially in oral presentations and group discussions. The role of fear of negative evaluation as a mediator in this context has not been thoroughly examined.

**Objective:** This study aimed to investigate the adverse impact of public speaking anxiety on academic performance, focusing on the mediating role of fear of negative evaluation among university students.

**Methods:** A correlational research design was employed, using convenience sampling to recruit 140 university students aged 18 to 25 ( $M = 20.67$ ,  $SD = 2.12$ ). Participants completed the Public Speaking Anxiety Scale, the Fear of Negative Evaluation Scale (Revised), and the Academic Achievement Scale. The data were analyzed using Pearson correlation and regression analysis to assess the relationships between public speaking anxiety, fear of negative evaluation, and academic performance. The analysis was conducted using IBM SPSS Statistics version 25.

**Results:** The correlational analysis revealed a significant positive correlation between public speaking anxiety and fear of negative evaluation ( $r = 0.19$ ,  $p < 0.05$ ), and a significant negative correlation between public speaking anxiety and academic performance ( $r = -0.22$ ,  $p < 0.01$ ). However, the fear of negative evaluation did not significantly mediate the relationship between public speaking anxiety and academic performance ( $\beta = -0.02$ ,  $SE = 0.06$ ,  $p > 0.05$ ). Women scored higher in public speaking anxiety ( $M = 59.86$ ,  $SD = 7.9$ ) and fear of negative evaluation ( $M = 39.05$ ,  $SD = 10.18$ ) than men, while men scored higher in academic performance ( $M = 16.45$ ,  $SD = 7.51$ ).

**Conclusion:** Public speaking anxiety significantly and negatively affects academic performance among university students, with fear of negative evaluation playing a less prominent mediating role than anticipated. These findings highlight the need for targeted interventions to address public speaking anxiety and related fears, considering gender differences in anxiety levels.

## 1 Introduction

Public speaking anxiety is a widespread phenomenon among students, which poses significant challenges to academic performance, particularly in situations requiring oral presentations and group discussions. Despite adequate preparation, public speaking anxiety can manifest as a specific form of anxiety, leading to various physiological symptoms, including trembling, speech difficulties, avoidance of eye contact, muscle tension, and increased heart rate (1). If left unmanaged, this anxiety can significantly impede academic and professional success by disrupting verbal fluency, nonverbal communication, content organization, and confidence, which are essential for effective public speaking (2). The importance of mastering these skills is crucial for both personal and professional development, as they are integral to career advancement and social interaction, especially in English-dominant fields (3).

For students learning English as a second language (ESL), public speaking presents additional challenges. ESL learners often experience heightened anxiety when engaging in verbal communication, which is exacerbated in educational settings during activities such as debates and presentations (4). This anxiety can hinder not only academic performance but also social interactions, as it is prevalent across different cultures, affecting approximately one-fifth of the global population (5). Public speaking anxiety and its related forms, such as social anxiety disorder, can prevent individuals from seizing career opportunities and participating in social activities, leading to long-term detrimental effects on their personal and professional lives (6).

Fear of negative evaluation (FNE), defined as the apprehension of being judged unfavorably by others, is a significant contributor to public speaking anxiety (7). This fear is characterized by an excessive concern with others' opinions, leading to anxiety in both social and academic settings, which can result in social avoidance and submissiveness (8). Studies have shown that FNE can negatively impact students' academic performance by lowering motivation and inducing a sense of inadequacy, thereby diminishing their ability to perform academically (9). The concern over negative evaluation is not only confined to real-life scenarios but is also evident in virtual environments, where it continues to moderate the relationship between social anxiety and discomfort (10).

The intricate relationship between public speaking anxiety, FNE, and academic performance necessitates further exploration to understand the underlying mechanisms and develop effective interventions. Previous research has highlighted the role of FNE as a potential mediator between public speaking anxiety and academic performance, but this relationship has not been thoroughly examined in university settings, particularly in non-Western contexts such as Pakistan (11). As educational institutions increasingly incorporate online courses and require students to engage in public speaking activities, understanding and addressing the impact of public speaking anxiety and FNE on academic performance becomes crucial (12).

This study seeks to fill the existing gap in the literature by investigating how public speaking anxiety affects academic performance, with a particular focus on FNE as a mediating factor. By examining the correlations between these variables, this research aims to inform the development of targeted interventions that can mitigate the adverse effects of public speaking anxiety and FNE on students' academic success. Such interventions could include cognitive-behavioral strategies and exposure therapy to enhance public speaking skills and reduce anxiety levels (13). Additionally, the study explores gender differences in public speaking anxiety, FNE, and academic performance, providing insights into how these variables may vary across different demographic groups. Understanding these dynamics is essential for developing tailored support systems that address the specific needs of students struggling with public speaking anxiety and FNE, ultimately fostering an educational environment conducive to learning and personal growth (14).

## 2 Material and Methods

In this study, a correlational research design was employed to examine the association between public speaking anxiety, fear of negative evaluation, and academic performance among university students. A sample of 140 students, aged 18 to 25, was recruited using convenience and purposive sampling methods to meet specific inclusion criteria. Participants were selected based on their enrollment in a university or higher education institution, experience with public speaking activities, and ability to comprehend English sufficiently to complete the study's questionnaires. Individuals with severe psychological disorders or speech delays that might interfere with their ability to answer the questionnaires were excluded from the study.

Participants were required to complete a comprehensive assessment process, which included a demographic questionnaire and three standardized scales: the Public Speaking Anxiety Scale (PSAS), the Brief Fear of Negative Evaluation Scale (Revised) (BFNES-R), and the Academic Performance Scale (APS). The PSAS, developed by Bartholomay and Houlihan (2016), measured the intensity of anxiety experienced during public speaking using a Likert-type scale from 1 (not at all) to 5 (extremely). This scale demonstrated high internal consistency, with reliability coefficients ranging from 0.744 to 0.88 (1). The BFNES-R, a 12-item scale created by Carleton et al. (2006), assessed the degree of fear of negative evaluation in various life contexts, with reliability coefficients between 0.96 and 0.97 (2). The APS, developed by Carson Birchmeier and colleagues in 2015, measured different facets of academic performance, using a scale from 1 (strongly disagree) to 5 (strongly agree), with internal reliability coefficients of 0.89 (3).

Before data collection, ethical approval was obtained from the relevant institutional review board, ensuring adherence to the Declaration of Helsinki principles. Participants were informed about the study's objectives, procedures, and their rights, including the right to withdraw at any time without penalty. Written informed consent was obtained from all participants prior to their involvement in the study. Confidentiality and anonymity of the data were assured throughout the research process. Data collection was conducted in a controlled environment to minimize potential biases and distractions. Participants completed the questionnaires in a quiet setting, allowing them to focus on their responses. The collected data were carefully reviewed to ensure completeness and accuracy, and any questionnaires with missing data or inconsistencies were excluded from the analysis.

The data analysis was performed using IBM SPSS Statistics version 25. Descriptive statistics were calculated to summarize the demographic characteristics of the sample, including age, gender, university type, and academic degree. Pearson product-moment correlation coefficients were computed to examine the relationships between public speaking anxiety, fear of negative evaluation, and academic performance. Regression analyses were conducted to explore the direct and indirect effects of public speaking anxiety on academic performance, with fear of negative evaluation as a mediator. Independent samples t-tests were used to assess potential gender differences in the study variables. Statistical significance was set at  $p < 0.05$  for all analyses, and effect sizes were calculated to provide additional context for the findings (4).

This methodological approach provided a comprehensive assessment of the interplay between public speaking anxiety, fear of negative evaluation, and academic performance in university students. The findings aimed to inform the development of targeted interventions to mitigate the adverse effects of these psychological factors on academic success.

### 3 Results

The study involved 140 university students aged 18 to 25, comprising 64 men (46%) and 76 women (54%), with a mean age of 20.67 years ( $SD = 2.12$ ). The majority of participants were undergraduate students (73%) from public universities (71%). Pearson product-moment correlation coefficients revealed a significant positive correlation between public speaking anxiety and fear of negative evaluation ( $r = 0.19, p < 0.05$ ), and a significant negative correlation between public speaking anxiety and academic performance ( $r = -0.22, p < 0.01$ ).

**Table 1: Demographic Characteristics of Participants (N = 140)**

Characteristics	Frequency (f)	Percentage (%)	Mean (M)	Standard Deviation (SD)
<b>Gender</b>				
Men	64	46		
Women	76	54		
Age			20.67	2.12
<b>University Type</b>				
Public	99	71		
Private	41	29		
<b>Academic Degree</b>				
Undergraduate	112	73		
Postgraduate	38	27		

Fear of negative evaluation showed a non-significant negative correlation with academic performance ( $r = -0.07$ ).

**Table 2: Correlation Between Public Speaking Anxiety, Fear of Negative Evaluation, and Academic Performance**

Variables	1	2	3	Mean (M)	Standard Deviation (SD)
1. PSA	-	0.19*	-0.22**	58.97	7.61
2. FNE		-	-0.07	38.91	9.84
3. AP			-	16.35	8.10

\*Note: PSA = Public Speaking Anxiety, FNE = Fear of Negative Evaluation, AP = Academic Performance, \* $p < 0.05$ , \*\* $p < 0.01$

Regression analyses demonstrated that public speaking anxiety had a significant total effect on academic performance ( $\beta = -0.24, SE = 0.11, p < 0.05$ ). The direct effect of public speaking anxiety on academic performance was significantly negative ( $\beta = -0.23, SE = 0.09, p < 0.01$ ). However, the indirect effect of fear of negative evaluation on academic performance was not significant ( $\beta = -0.02, SE = 0.06, p > 0.05$ ).

**Table 3: Regression Analysis of Study Variables**

Consequences	FNE (M)			AP (Y)
Antecedents	$\beta$	SE	p	$\beta$
PSA (X)	0.24	0.11	0.02	-0.23
FNE (M)				-0.02
Constant	24.4	6.42	<0.001	31.25
R <sup>2</sup>	0.03			0.05
F	5.17			3.81

The mediation analysis revealed that the indirect path from public speaking anxiety to academic performance through fear of negative evaluation was insignificant (unstandardized effect = -0.006, standardized effect = -0.006).

**Table 4: Indirect Path Analysis**

Indirect Path	Unstandardized Effect	Standardized Effect	Lower Level	Upper Level
FNE	-0.006	-0.006	-0.04	0.02

Independent samples t-tests indicated no significant gender differences in public speaking anxiety, fear of negative evaluation, and academic performance. However, women scored higher in public speaking anxiety ( $M = 59.86$ ,  $SD = 7.9$ ) and fear of negative evaluation ( $M = 39.05$ ,  $SD = 10.18$ ), whereas men scored higher in academic performance ( $M = 16.45$ ,  $SD = 7.51$ ).

**Table 5: Independent Samples T-Test for Gender Differences**

Variable	Gender	Mean (M)	Standard Deviation (SD)	t(138)	p	Cohen's d
PSA	Men	57.92	7.16	-1.51	0.12	0.25
	Women	59.86	7.9			
FNE	Men	38.73	9.51	-0.19	0.85	0.03
	Women	39.05	10.18			
AP	Men	16.45	7.51	0.12	0.89	0.02
	Women	16.27	8.61			

These findings demonstrate the significant impact of public speaking anxiety on academic performance, with fear of negative evaluation playing a mediating, albeit non-significant, role. The study also highlights gender differences in public speaking anxiety and academic performance, suggesting a need for tailored interventions to support students in overcoming these challenges.

## 4 Discussion

The findings of this study elucidated the complex relationship between public speaking anxiety, fear of negative evaluation, and academic performance among university students. A significant positive correlation between public speaking anxiety and fear of negative evaluation was observed, indicating that as students' anxiety towards public speaking increased, so did their fear of being negatively evaluated by others. This aligns with previous research that has demonstrated a similar connection, where heightened fear of negative evaluation is associated with greater levels of social anxiety (15, 16). This suggests that interventions aimed at reducing public speaking anxiety might also need to address the fear of negative evaluation to be more effective.

Public speaking anxiety was found to have a significant negative impact on academic performance, which is consistent with the findings of earlier studies that have shown how anxiety can hinder students' ability to perform well in academic settings (17, 18). The physiological and psychological symptoms associated with public speaking anxiety, such as increased heart rate, speech difficulties, and avoidance behavior, can disrupt cognitive processes crucial for learning and performance (19). Despite the significant direct effect of public speaking anxiety on academic performance, the indirect effect through fear of negative evaluation was not significant in this study. This finding suggests that while fear of negative evaluation is related to public speaking anxiety, it may not be the primary mechanism through which anxiety affects academic outcomes. It indicates the need for further research to explore other mediating factors, such as cognitive distortions or self-efficacy beliefs, which may play a more prominent role (20,21).

The study also explored gender differences in the levels of public speaking anxiety, fear of negative evaluation, and academic performance. Although no significant gender differences were found in the correlations between these variables, women reported higher levels of public speaking anxiety and fear of negative evaluation compared to men, whereas men performed slightly better academically. These findings corroborate previous research suggesting that women may be more prone to experiencing higher anxiety levels due to societal expectations and self-imposed pressures to perform well (22, 23). This gender disparity underscores the importance of considering gender-specific approaches when designing interventions aimed at reducing public speaking anxiety.

One of the strengths of this study was its focus on a non-Western context, specifically university students in Pakistan, which adds to the growing body of literature examining public speaking anxiety across diverse cultural settings. However, the study also had limitations, including the use of convenience sampling and a relatively small sample size, which may limit the generalizability of the findings to broader populations. The uneven distribution of participants across demographic subgroups, such as the predominance of undergraduate students over postgraduates, may have influenced the results. Future research should consider employing stratified sampling techniques to ensure a more representative sample and explore how academic standing and institutional type might affect public speaking anxiety and academic performance (24, 25).

Additionally, the cross-sectional design of the study precludes causal inferences about the relationships between public speaking anxiety, fear of negative evaluation, and academic performance. Longitudinal studies would be beneficial in examining these relationships over time and establishing causality. Moreover, the study relied on self-reported measures, which may be subject to social desirability bias or inaccuracies in self-assessment. Incorporating objective performance measures and triangulating data from multiple sources could enhance the validity of the findings (26).

The implications of this study are significant for educators, psychologists, and policymakers aiming to support students in overcoming public speaking anxiety. Interventions should focus on developing effective communication skills, reducing anxiety through cognitive-behavioral strategies, and enhancing students' confidence and self-esteem (27, 28). Tailored programs that address the specific needs of students, considering factors such as gender and cultural background, are crucial for fostering an environment that promotes academic success and personal growth. By addressing the psychological barriers associated with public speaking anxiety, educational institutions can empower students to perform better academically and prepare them for future professional challenges (29).

## 5 Conclusion

The study concluded that public speaking anxiety significantly negatively impacts academic performance among university students, with a notable correlation with fear of negative evaluation. Although fear of negative evaluation did not mediate the relationship between anxiety and performance, its association with public speaking anxiety highlights the need for comprehensive interventions. These findings underscore the importance of addressing psychological barriers to academic success, particularly for students in non-Western contexts like Pakistan. In terms of human healthcare implications, developing targeted programs that integrate cognitive-behavioral strategies and confidence-building exercises can significantly reduce anxiety levels, thereby enhancing students' academic outcomes and overall well-being. Such interventions are vital for preparing students to overcome challenges in both academic and professional settings, contributing to improved mental health and quality of life.

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**Disclaimers**

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<b>Author Contributions</b>	Maryam Bibi conceived the study design and methodology. Noor Ul Huda conducted data collection and analysis. Muhammad Sajjad Shahid contributed to the literature review and manuscript preparation. Sara Mukhtar and Rifat Mukhtar assisted with data interpretation and manuscript revisions.
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