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Investigating the Intensity of Public Speaking Anxiety among Management Sciences Undergraduate Students

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ABSTRACT

Background of the Study: The dread of public speaking is a widespread occurrence, particularly among students. Speaking in public and expressing our opinions can be quite difficult when we are anxious. This research examines the intensities of public speaking anxiety management sciences undergraduate student faces have while interacting with the public.

Methodology: The study was cross-sectional and involved 384 students, including first, second, third and final year management sciences undergraduate students from several Karachi institutions. The PRSPA scale was used to collect data using Google forms.

Results: According to the study, undergraduate students in the Management Sciences experience less fear when speaking in front of an audience as their academic year increases. Students in their last year reported the lowest levels of anxiety (62.5% low anxiety, mean score 94.58), while those in their first year had the greatest levels (67.7% high anxiety, mean score 131.39). Anxiety levels gradually decreased from the first to the fourth year, most likely as a result of more presentations, class debates, and developing communication skills. Higher years also showed less variation in worry, suggesting more consistent levels of confidence. According to these results, early interventions are crucial for first-year students in particular in order to enhance their academic progress and public speaking growth.

Conclusion: Depending on how different students suffer public speaking anxiety, educational institutions can adjust their support services to better meet the requirements of the former group. First-year students adjusting to the demands of college life may benefit most from early therapy that emphasizes stress management, public speaking techniques, and anxiety reduction.

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Introduction

An essential skill for success in today's more competitive and globalized academic and professional setting is the ability to communicate effectively. Communication is one of the most important 21st-century talents, according to both companies and universities, especially in fields like management, business, and leadership. Public speaking is one of the most important communication skills for expressing ideas, influencing choices, and managing teams. Nevertheless, despite its significance, public speaking sometimes causes

severe anxiety and panic, particularly among college students. Public speaking anxiety (PSA) is one of the most often reported scholastic difficulties in the globe (Dansieh, et al., 2021).

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One form of social anxiety that manifests when people are asked to speak in front of an audience is public speaking anxiety. Stress, perspiration, parched lips, fast heartbeat, mental blockages, and a recurring worry of being judged negatively are just a few of the cognitive, emotional, and physical symptoms that it presents as. Effective communication can be severely hampered by these symptoms, which can impact a person's confidence and academic achievement. Although PSA is not unusual, the severity of each person's exposure can differ greatly depending on a variety of factors, including personality qualities, cultural background, prior experiences, and perceived audience expectations (Ibrahim et al., 2022; Sahara and Bengkulu, 2022).

Management Sciences students are among those who are most commonly exposed to public speaking situations in the context of higher education. Clear, self-assured, and persuasive speaking abilities are necessary for oral presentations, case discussions, business pitches, group projects, and public defenses, all of which are frequently included in their curriculum. Paradoxically, the field that seeks to equip students for strategic and leadership responsibilities sometimes puts them in circumstances that cause severe nervousness while speaking. Higher PSA levels have the potential to discourage students from engaging in class debates, offering to take on leadership responsibilities, or pursuing opportunities that require public engagement, which might hinder their academic progress and future employment chances (Spyridonis, Daylamani-Zad and Nightingale, 2024).

According to Lintner and Belovecová (2024) western nations experience PSA at a rate of 7–13%. According to the American Psychiatric Association, one type of social anxiety disorder in which sufferers frequently fear rejection is the fear of public speaking. Public speaking may affect up to 75% of human behavior, claims Seals (2022). A survey found that 21% of respondents had at least once dealt with this problem, and they believed it to be quite serious and the cause of great suffering or evasion (Rasouli, et al., 2022). 25% of young individuals also have a serious phobia of public speaking, according to Solmi et al. (2022). A different survey found that 34% of Canadian respondents had increased unease and were unsure of how to communicate in public compared to responders from other nations (Buser and Yuan, 2023). 30 to 40% of Americans feel communication fear, which affects their ability and willingness to speak in front of an audience, according to Uyer (2023) who quoted McCroskey (1984). PSA was prevalent in 53% of medical students, but only in 43% of non-medical students, according to the research conducted by Aslam et.al (2021) at the University of Lahore, Pakistan. Anxiety may also be exacerbated by the performance-and peer-evaluation culture prevalent in business education settings. Because they worry that showing any signs of anxiousness would be seen as ineptitude, students may feel more pressure to please classmates and instructors. Even while PSA is becoming more widely acknowledged as a hindrance to participation and learning, there is still a dearth of discipline-specific research that examines the prevalence and severity of this anxiety in undergraduates studying management sciences.

In order to close this gap, this study will systematically investigate the degree of public speaking anxiety experienced by undergraduate students enrolled in Management Sciences degrees through determining the degree of anxiety and its fluctuations according to the enrolled years. This study aims to offer practical advice to university counselors, curriculum designers, and educators. It is essential to comprehend the level of anxiety rather than just its presence in order to create focused treatments that will help students get over their anxieties, improve their communication abilities, and more confidently become ready for success in the workplace. Hence, focusing on the objectives:

1. To find out the varying levels of public speaking anxiety among first, second, third final-year students.
2. To analyze the significant difference in the intensity of public speaking anxiety levels among first, second, third final-year students.

Literature Review

Public speaking anxiety causes a student to freeze with dread. Most of the students encountered inattention, cold or sweaty hands or feet, fear of criticism, trembling, nausea, anxiety, and increased heart rate, clumsy and doubtful. Such physical symptoms might cause issues in the long run by creating multiple psychophysiological disorders. Whereas there are multiple factors involved in causing and affecting undergraduate students with high levels of public speaking anxiety. Some of the factors include the year students are enrolled and gender. Female students have been reported to face more public speaking anxiety in comparison to male students (Rahman, 2018; Ali et al, 2025).

Anxiety and dread of public speaking among undergraduates in pedagogy were examined by Tran et al. (2021) and it was found that students studying educational science experienced higher levels of nervousness while speaking in front of an audience. In addition, 14.2% of students had mild anxiety, 24.4% had moderate anxiety, and 21.1% had high anxiety. Research by Balakrishnan et al. (2022) concluded that the mere idea of giving a speech and excessive concerns about being questioned are the factors due to which engineering students face moderate level anxiety. Majority of students concurred that the main cause of anxiety is fear of receiving a poor grade, which is followed by communication apprehension and test anxiety (Sugiyati and Indriani, 2021).

Shabbir et al. (2025) cited that public speaking anxiety and stress affects students' attitudes, motivation, interactions, and learning style toward learning at universities in Lahore. They found that public speaking anxiety and a negative attitude toward learning are strongly positively correlated with stress. While it also affected students' willingness to participate in class discussions and presentations, stress was linked to detrimental impacts on students' motivation and focus. PSA was further discussed by Rayani et al. (2023) in correlational comparative cross-sectional research including 209 Saudi nursing students from three distinct levels in the same year. All of the three-year students exhibited moderate anxiety, according to the findings. highlighted that student's distinct fear of public speaking negatively affects their college experience as a whole, specially they experience mild to moderate speaking anxiety when delivering oral presentations in English due to their fear of receiving unfavorable peer evaluations.

There are some variations in the level of anxiety across the sexes, with women being described as being more anxious than men. Higher education institutions must recognize students' anxiety about public speaking and provide more support during oral presentation assessments (Grieve et al., 2021; Dellah et al., 2020). To determine the effectiveness of group therapy services with reframing techniques in treating the problem of PSA, Wardani and Trisnan (2022) conducted research to track participant characteristics, such as pulse rate, excessive sweating, stomach pain, trembling, and head down or away from the eyes to check PSA levels before and after using group therapy services. It was demonstrated that the effectiveness of group therapy services helps to overcome public speaking anxiety.

Methodology

Study Design

The study design was cross-sectional.

Target Population

Management sciences undergraduate students from Karachi were targeted to collect the data.

Study Setting

The study was carried out in business colleges in Karachi.

Sample Size

The sample size was calculated using Open epi version 3.0, considering 1 million populations, with a 5% margin of error and 95% confidence interval, the sample size was 384.

Sampling Technique

A convenient Sampling Technique was used.

Inclusion criteria

Undergraduate 1st, 2nd, 3rd and final year management sciences students.

Exclusion criteria

Students who do not belong to the business/management sciences field
Incomplete Questionnaire.

Data Collections Tools

Data was gathered using the Personal Report of Public Speaking Anxiety (PRPSA) scale (McCroskey, 1970). It is reliable with cronbach's alpha value $>.90$ since it only addresses anxiety related to public speaking.

Data Collection Procedure

Google Forms was used to gather data online from many Karachi-based business universities. Brief explanations of the research study's methodology, benefits, and drawbacks were given to informed consent. The scale was updated with demographic data. As defined by (McCroskey, 1970), scoring on PRPSA was analyzed by considering the following defined criteria:

Step 1. Add scores for items 1, 2, 3, 5, 9, 10, 13, 14, 19, 20, 21, 22, 23, 25, 27, 28, 29, 30, 31, 32, 33, and 34

Step 2. Add the scores for items 4, 6, 7, 8, 11, 12, 15, 16, 17, 18, 24, and 26

Step 3. Complete the following formula:

$$\text{PRPSA} = 72 - \text{Total from Step 2} + \text{Total from Step 1}$$

The calculated score should be between 34 and 170. If the score lay below 34 or above 170, there would be a mistake in computing the score. Table 1 concluded the intensity of the PSA as per the acquired score.

Public Speaking Anxiety Intensity	Score
High	> 131
Moderate	98-131
Low	< 98

Table 1: PSA Score

Statistical Analysis

1. Excel was used to analyze the data.
2. Descriptive statistics, i.e. frequency, mean, standard deviation, and variance was calculated.

Ethical Considerations

The participant's verbal and written consent was required before the data-gathering process could begin. It ensured that all collected data was kept anonymous and private and was only used for research.

Results

Demographic details

The demographic distribution of the undergraduate participants in the public speaking anxiety research is shown in Table 2. A total of 384 students, 50% male ($n = 192$) and 50% female ($n = 192$), took part in the study. Participant distribution was likewise uniform by academic year, with 96 students (25%) registered in each of the first, second, third, and fourth academic years. A thorough examination of the potential variations in public speaking fear among undergraduate students is made possible by this balanced portrayal. In order to represent a varied academic environment, students were selected from eight different universities. Ilma University accounted for 28.64 percent of the participants, with KASBIT (22.13%), Iqra University (19.27%), and IOBM (11.02%) following closely behind. Bahria University (9.11%), University of Karachi (UOK) (3.90%), MAJU (2.08%), and Jinnah University for Women (1.82%) had lower percentages of responders.

The findings are more broadly applicable because of the diverse range of institutions that offer a wide view on students' experiences with public speaking in a variety of academic contexts. Additionally, the inclusion of a women-only university and both public and private universities broadens the sample's diversity. In terms of gender, academic year, and institutional history, the demographic data show a diversified and well-balanced sample overall, which offers a solid basis for examining the degree of public speaking anxiety among undergraduate students studying management sciences.

Demographics	Frequency	Percentage
Gender		
Male	192	50%
Female	192	50%
Years Enrolled		
1st year	96	25%
2nd year	96	25%
3rd year	96	25%
4th year	96	25%
Institutes		
Ilma University	110	28.64%
Kasbit	85	22.13%
Iqra University	74	19.27%
Iobm	50	13.02%
Bahria University	35	9.11%
Uok	15	3.90%
Maju	8	2.08%
Jinnah University for Women	7	1.82%

Table 2: Demographics

Public Speaking Anxiety Levels

A thorough analysis of public speaking levels among undergraduate Management Sciences students throughout the course of four academic years had been interpreted in Table 3. Among first-year students, the findings were found to be particularly alarming. 67.70% of the population ($n = 65$) reported having high public speaking anxiety, whereas just 26.04% and 6.25% ($n = 25$ & 6) had moderate to low level anxiety. In the second year, the data shows a noticeable shift. High anxiety drops to 27.08%, and low anxiety rises to 22.91%. Still, the largest proportion of second-year students—50%—fall into the moderate category. The trend of progress continues by the third year. While just 20.83% of students continue to fall into the high anxiety group, while 31.25% experienced moderate level anxiety and over half of them (47.91%) experienced low level public speaking anxiety. Students in their last year exhibited the most noticeable change. Only 11.45% ($n = 11$) still had considerable high-level anxiety, but an astounding 62.5% ($n = 60$) reported low levels of public speaking anxiety.

	PSA Levels	Frequency	Percent
First Year	Low	6	6.25%
	Moderate	25	26.04%
	High	65	67.70%
	Total	96	25%
Second Year	Low	22	22.91%
	Moderate	48	50%
	High	26	27.08%
	Total	96	25%
Third Year	Low	46	47.91%
	Moderate	30	31.25%
	High	20	20.83%
	Total	96	25%
Final Year	Low	60	62.5%
	Moderate	25	26.04%
	High	11	11.45%
	Total	96	25%

Table 3: Public Speaking Anxiety Levels

Varying Levels and Differences of Public Speaking Anxiety among all the years

The variance and standard deviation of public speaking anxiety levels (low, moderate, and high) among undergraduate Management Sciences students by academic year are shown in Table 4. This statistical finding enhances the previous frequency-based analysis by illuminating the consistency or dispersion of anxiety experiences within each academic level by displaying not only the number of students who fall into each anxiety category but also the wide range of scores within those categories.

Low level Public Speaking Anxiety

The first year ($SD = 18.11$) has the highest standard deviation for low anxiety levels, which progressively declines throughout the years to reach the lowest in the last year ($SD = 13.73$). From 328 in first-year students to 188.55 in final-year students, the accompanying variance likewise decreases.

Moderate level Public Speaking Anxiety

Remarkably, the third year in the moderate group exhibits higher variability than previous years ($SD = 9.14$, $Variance = 83.63$).

High level Public Speaking Anxiety

The third year (SD = 8.04) had the most variability for students with high anxiety, whereas the final year (SD = 6.90) had the lowest variability.

	PSA Levels	First Year	Second Year	Third Year	Final Year
Standard Deviation	Low	18.11	14.58	14.16	13.73
	Moderate	6.92	8.24	9.14	8.08
	High	7.780	7.60	8.04	6.90
Variance	Low	328	212.66	200.70	188.55
	Moderate	47.89	68.04	83.63	65.32
	High	60.53	62.94	64.72	47.69

Table 4: Varying Levels

Significant Difference in the Intensity of Public Speaking Anxiety between First and Final-Year Rehab Students

The average PSA ratings for students in each academic year are shown in Table 5. The mean public speaking anxiety score for first-year students is 131.39, which falls above the threshold for high level anxiety. The mean score for the second year is 111.78, which puts this group in the moderate anxiety range. The mean score falls to 102.22 by the third year, which is still within the moderate anxiety range but getting closer to the lower threshold. The final year shows the biggest decline, with a mean score of 94.58, which is within the low anxiety category.

	First Year	Second Year	Third Year	Final Year
Mean	131.39	111.78	102.22	94.58

Table 5: Significant Difference

Discussion

The current study sought to determine the degree of public speaking anxiety experienced by Management Sciences undergraduate students, with an emphasis on the variations in anxiety levels among academic years. The results provide important information about PSA's incidence and development in a university environment. The inverse correlation between the academic year and the degree of public speaking anxiety is among the most notable trends found. With an average score of 131.39, first-year students showed the greatest levels of public speaking anxiety, placing them in the high anxiety group. This finding is consistent with other studies that found people who are new to academic settings frequently experience higher levels of performance-related stress and lack the coping skills necessary for public speaking (Rayani et al, 2023). The idea that first-year students are more sensitive is further supported by the categorical analysis, which showed that over 67% of them reported having high level anxiety.

The research indicates a steady decrease in anxiety levels as kids advance academically. Students in their second year fell into the moderate anxiety group with a mean score of 111.78. Increased exposure to classroom lectures, involvement in scholarly discussions, and the steady improvement of communication skills might all be responsible for this decline. The mean score dropped even lower by the third year to 102.22, indicating that students are still adjusting and becoming

more at ease while speaking in front of an audience. It's interesting to note that this year also showed the greatest variation in moderate anxiety levels, suggesting a more diverse group, with some individuals moving closer to confidence and others possibly regressing or stalling. Final-year students showed the biggest improvement, with a mean anxiety score of 94.58, firmly putting them in the low anxiety zone. Together with the categorical data that indicates more than 62% of final-year students had little fear, this shows that frequent exposure to public speaking, together with academic and personal maturity, can gradually reduce PSA. This is consistent with social cognitive theory, which holds that practice and mastery experiences boost performance confidence and gender don't play any specific role in experiencing PSA (Bandura, 2023; Concepcion et al., 2023). Furthermore, the standard deviation and variance analysis offered valuable information on how anxiety was distributed during each school year. In the "low anxiety" group, first-year students had the greatest variability, suggesting that confidence levels are still erratic and range greatly among those who express low anxiety. The final-year students, on the other hand, showed the least variation, suggesting that individuals with low anxiety levels were more consistently confident.

Conclusion

This study investigated the degree of public speaking anxiety among Management Sciences undergraduate students by academic year. A remarkable trend emerged from the data: students' levels of PSA dramatically declined as they moved from their first to their last year. Average anxiety ratings were greatest among first-year students, who frequently fell into the high-anxiety group, whereas final-year students tended to report modest anxiety levels. Anxiety intensity and academic success have an inverse association, which implies that exposure to oral exams, classroom debates, and academic presentations is crucial in gradually lowering public speaking anxiety.

The steady decrease in anxiety levels also suggests that students progressively gain the self-assurance and communication abilities required to thrive in both academic and professional settings. The elevated anxiety levels among first-year students, however, are concerning and point to the obvious need for institutional measures to offer early assistance. In the end, the study confirms how crucial it is to incorporate the development of communication skills throughout the undergraduate program. These results add significant knowledge to the body of research on academic anxiety and emphasize the necessity of focused interventions to guarantee that students have the fundamental soft skills needed for leadership positions in contemporary workplaces.

Recommendations

Based on the results, a number of suggestions are made to assist educational institutions in reducing the high levels of undergraduate students' anxiety related to public speaking. First, specific treatments in the form of seminars on beginning communication skills, public speaking-focused orientation modules, and small-group exercises that foster verbal confidence in relaxed environments should be directed towards early-year students, especially those in their first year. These must be incorporated into the curriculum to guarantee that every student takes part. It is recommended that faculty members receive training on identifying public speaking anxiety symptoms and using inclusive teaching strategies that promote engagement without increasing performance pressure. Formative assessments, such as panel discussions, peer presentations, or spontaneous speaking exercises that provide regular, low-stakes speaking chances, can be incorporated by instructors. Third, academic institutions have to think about incorporating a public speaking and professional communication course

that is organized and gets more sophisticated as students' progress through the grades. Through shared experiences and peer assistance, mentorship programs that match senior students with freshmen may also help lower anxiety. Finally, for students with significant levels of anxiety, student support services like counseling centers should provide specialized psychological assistance or cognitive behavioral therapy (CBT) sessions. A multifaceted strategy that integrates social, emotional, and academic assistance is crucial for giving students the self-assurance and abilities they need to succeed academically and in their future employment.

Future Research and Limitations

Although this study provides insightful information on PSA among students studying management sciences, it must be noted that it has a number of drawbacks. First, rather than monitoring changes in students throughout the course of their academic journey, the research employed a cross-sectional design, recording student anxiety levels at a single point in time. As a result, the study is unable to conclusively establish causality or the growth of public speaking confidence. Second, self-reported data, which might be skewed by social desirability bias, were used in the study. Due to shame or a desire to project confidence, students may choose not to disclose their nervousness. This can have an impact on the findings' dependability and accuracy. Future studies might provide a more objective assessment by including psychological tests or observational methodologies.

Third, the results may not be as applicable to other Management Sciences students in other areas, cultures, or educational institutions because the sample was taken from a limited number of universities. PSA levels may be impacted by variations in educational settings, student demographics, or instructional methods. Lastly, the study only examined the academic year as a variable; it did not examine other possibly significant variables like gender, personality characteristics, previous educational experience, or extracurricular activities. Future studies should take a more comprehensive approach to comprehending the various factors affecting anxiety related to public speaking.

Author's Contribution

Conception or Design: Saman Aftab, Iqra Salahuddin

Data Collection and processing, Analysis or Interpretation of Data: Faseeha Rabbi Shah, Tanzeel Tariq, Iqra Salahuddin

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