

Exploring Aspects of Public Speaking Anxiety

Nurazlina Samsudin^{1*}, Haryana Mohd Hairi², Norhalida Othman³, Ruzita Manshor⁴, Mohd Syafiq Md Salleh⁵, Okfalisa⁶

^{1,4}Faculty of Business Management, University Technology MARA, Selangor Branch, Puncak Alam Campus, Malaysia,

²Faculty of Applied Sciences, University Technology MARA, Johor Branch, Pasir Gudang Malaysia.

³Faculty of Electrical Engineering, University Technology MARA, Johor Branch, Pasir Gudang Campus, Malaysia.

⁵Toyo Kanetsu Malaysia Sdn bhd,

⁶Informatics Engineering Department, Faculty Science and Technology, Universitas Islam Negeri Sultan Syarif Kasim Riau, Indonesia

*Corresponding Author

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ABSTRACT

Public speaking anxiety is a widespread issue that affects individuals' academic, social, and professional performance. This study explores the cognitive, behavioural, and physiological aspects that contribute to public speaking anxiety among university students. Using a quantitative survey method, data were collected from 212 students from social sciences and sciences faculty through a structured questionnaire. The research aimed to answer how cognitive thoughts (e.g., fear of judgment), behavioural reactions (e.g., avoidance or excessive rehearsing), and physiological responses (e.g., sweating or rapid heartbeat) influence public speaking anxiety. Additionally, the study examined whether there are significant differences in the mean levels of anxiety across these three aspects. The findings revealed that cognitive factors had the strongest influence, followed by physiological and behavioural factors. These results suggest a need for targeted interventions addressing thought patterns and emotional regulation to effectively manage public speaking anxiety. The study offers practical implications for educators and mental health professionals in supporting students' communication development.

Keywords: Public speaking anxiety, Cognitive-Behavioral Factors, Speech Performance Anxiety, Cognitive Distortions

INTRODUCTION

Background of Study

Anxiety is broadly defined as a mental state of intense tension, worry, or apprehension about potential future threats (Saviola et al., 2020). In the context of communication, public speaking anxiety (PSA) refers to the specific anxiety or fear experienced when preparing to speak or speak in front of an audience. PSA is often viewed as a situational form of social anxiety, essentially a fear of negative evaluation by others during public speaking. It is sometimes informally termed glossophobia, indicating the phobic nature of this fear. Defined as the fear or apprehension of speaking in front of an audience (American Psychiatric Association, 2013), individuals with PSA commonly exhibit a range of symptoms including physiological arousal (e.g., sweating, rapid heartbeat), cognitive distress (e.g., worrying "I'll appear incompetent"), emotional discomfort, and avoidance behaviors (Gallego et al., 2021; Bodie, 2010). These symptoms underline that PSA is not merely nervousness but a recognizable anxiety response within clinical and educational psychology.

Despite the prevalence of numerous studies on PSA, the condition remains a significant concern in today's fast-paced and communication-driven society. Studies have consistently reported that up to 75% of individuals experience some degree of anxiety when engaging in public speaking (Bodie, 2010; Crown Counseling, 2023). This is particularly concerning among university students, for whom public speaking is a frequent requirement in academic presentations and assessments (Choy & Oo, 2022; Gallego et al., 2021). Differences in PSA experiences have also been observed between students of science and social science disciplines. Science students, who often focus on data-driven or technical presentations, may experience heightened anxiety due to perceived pressure to deliver accurate and concise information, often in front of expert audiences. Conversely, social science students are typically required to engage in more discussion-based or persuasive speaking, which can evoke anxiety related to personal expression, critical evaluation, and audience interaction (Ramasamy et al., 2022; Choy & Oo, 2022). These disciplinary differences can influence not only the type and intensity of PSA experienced but also the coping strategies students employ.

One of the challenges in addressing PSA lies in the complexity of its assessment. Traditional measures such as self-reported questionnaires often do not align with physiological or behavioral indicators of anxiety (Gallego et al., 2021). For instance, individuals may report low anxiety yet display significant signs of stress when speaking publicly, highlighting the multifaceted nature of the experience. As such, more recent research advocates for a multidimensional approach in understanding PSA that includes self-report, behavioral observation, and physiological data (Lo et al., 2022). Recent technological innovations such as Virtual Reality Exposure Therapy (VRET) have introduced promising interventions to manage PSA in more immersive and controlled settings. VRET allows users to simulate public speaking environments, offering repeated exposure that reduces anxiety levels over time (Mani, 2022; Anderson et al., 2013). A single-subject study by Anderson et al. (2022) further supported the effectiveness of brief VR sessions in real-world applications, even in non-clinical settings.

In Malaysia, PSA is also a pertinent issue among university students, especially English as a Second Language (ESL) learners. Lecturers at Universiti Teknologi MARA (UiTM) reported that PSA hampers students' performance during oral presentations, often rooted in lack of confidence, fear of judgment, and insufficient speaking practice (Ramasamy et al., 2022). Similarly, Choy and Oo (2022) found that students felt nervous due to audience size and limited proficiency, reinforcing that language anxiety overlaps with PSA. Even with increased awareness and research, PSA persists due to evolving social dynamics, including increased reliance on digital and virtual communication platforms. These settings may reduce face-to-face interactions but also introduce new performance pressures and evaluation standards (Gallego et al., 2021; Lo et al., 2022).

Therefore, exploring public speaking anxiety remains highly relevant. This study, focusing on university students, aims to investigate how various factors contribute to PSA and how individuals perceive and cope with it. Special attention will be given to comparing experiences between students in science and social science fields, offering insights into how academic discipline influences anxiety triggers and coping with mechanisms. By integrating findings from recent literature and employing a multidimensional framework, the study seeks to offer a holistic view that can inform interventions tailored to the needs of students within academic environments.

Statement of Problem

Public speaking anxiety (PSA) remains a significant psychological barrier among Malaysian university students, negatively impacting their academic performance, communication skills, and career readiness. Although PSA has been well-researched internationally, local findings continue to underscore its persistent relevance.

Public speaking anxiety (PSA) continues to be a prevalent psychological barrier among university students, significantly affecting their academic performance, communication skills, and future employability. Although PSA has been extensively studied internationally, recent local findings indicate it remains a pressing concern within Malaysian higher education institutions (N. A. M. Naser and I. A. M. Isa, 2021).

A study by Lintner and Belovecova (2023) involving 1,745 undergraduates in the Czech Republic across disciplines revealed that demographic factors such as gender and academic year predicted PSA more significantly than field of study. The study found that women, non-binary individuals, graduates of academic high schools, and bachelor's students are more prone to public speaking anxiety. However, the study also

emphasized the need to investigate PSA within specific academic and cultural contexts. In Malaysia, a study by F. Y. Bin et al. reported that 49.3% of 362 medical undergraduates at a public university experienced moderate to high levels of public speaking anxiety (PSA). The findings revealed significant associations between PSA and several factors, including race, psychological flexibility, prior public speaking experience, and formal training. Notably, the study emphasized the role of racial differences as a contributing factor to PSA—an especially relevant consideration in Malaysia's multiracial society. However, the study's focus on a single academic discipline limits the broader applicability of its findings. Furthermore, its cross-sectional design does not account for how PSA may evolve over time. In addition, there is a lack of comparative research examining PSA between students from different academic streams, particularly science and social science, despite clear differences in presentation expectations and communication styles. Addressing these gaps, the present study aims to explore PSA through a multidimensional framework while comparing disciplinary experiences among Malaysian undergraduates (F. Y. Bin et al., 2024).

Furthermore, PSA is increasingly recognized as a multidimensional experience comprising cognitive (e.g., fear of negative evaluation), behavioral (e.g., avoidance, fidgeting), and physiological (e.g., sweating, trembling) components (Gallego et al., 2021; Bodie, 2010). These components may vary in intensity depending on academic context. Moreover, a cross-cultural systematic review and meta-analysis conducted by A. McWilliam reported that psychological interventions such as cognitive-behavioral therapy and improvisational training demonstrate large effects ($g = 1.17$) in reducing PSA, but emphasized the need for discipline-sensitive methods given variable response patterns across student populations (A. McWilliam, 2024).

Recently, a study of university students in Sweden validated the Public Speaking Anxiety Scale (PSAS) and confirmed that physiological and cognitive anxiety are distinct constructs with different implications for intervention design (S. Demir and M. O. Kan, 2025). Similarly, a gender-inclusive study involving over 1,700 undergraduates across multiple countries found that factors such as gender, academic year, and educational background significantly predicted PSA, although field of study was not always a major predictor—highlighting the need to analyze PSA within specific disciplinary contexts (B. Belovecová, 2024).

Despite Malaysia's growing body of localized PSA research, comparative studies between science and social science students remain limited. Students in science disciplines often face anxiety due to content complexity and precision demands, while social science students encounter anxiety when engaging in interactive, discourse-driven presentations. By exploring cognitive, behavioral, and physiological dimensions of PSA across academic disciplines among Malaysian undergraduates, this study seeks to reveal discipline-specific manifestations of anxiety. Such insights will support the development of targeted cultural interventions to enhance public speaking confidence and academic performance within and beyond university settings.

Objective of the Study and Research Questions

This study is done to explore aspects of public speaking anxiety. Specifically, this study is done to answer the following questions;

1. How does cognitive aspects influence public speaking anxiety?
2. How does behavioural aspects influence public speaking anxiety?
3. How does physiological aspects influence public speaking anxiety?
4. How do the means differ for different aspects of public speaking anxiety?

LITERATURE REVIEW

Theoretical Framework of the Study

The Social Cognitive Theory (SCT), introduced by Bandura (1986), provides a comprehensive framework for understanding how individuals acquire and regulate behavior through a triadic interaction of personal factors, environmental influences, and behaviors. Central to SCT is the concept of self-efficacy of an individual's belief in their ability to succeed in specific situations which significantly influence motivation, emotional responses, and behavioral outcomes. In the context of public speaking, these mechanisms are especially relevant, as learners' perceptions of their speaking ability are often shaped by previous experiences, observed role models,

and the feedback they receive. SCT posits that individuals actively construct meaning from their experiences and use this information to guide future performance and emotional regulation, such as managing anxiety before and during a speech.

Public speaking anxiety (PSA) can thus be interpreted through SCT because of low self-efficacy, negative self-appraisal, or an unsupportive environment. When learners internalize past speaking failures or lack exposure to positive public speaking role models, they may develop cognitive distortions such as fear of judgment, performance pressure, or social embarrassment. These affective reactions are reinforced by avoidance behaviors and can lead to a cycle of anxiety and decreased communication competence. Recent studies affirm this connection, indicating that students with higher levels of self-efficacy tend to experience reduced PSA and perform more confidently and coherently in oral presentations (Sana et al., 2024). Additionally, environmental factors such as peer feedback, classroom atmosphere, and instructor support play a critical role in shaping one's public speaking experience, either by mitigating or amplifying anxiety.

To effectively reduce public speaking anxiety (PSA), interventions should focus on enhancing self-efficacy through specific methods such as mastery experiences, vicarious learning, and supportive feedback. For example, providing structured opportunities for individuals to practice public speaking in low-stress environments has been shown to improve self-efficacy and reduce anxiety (Marshall-Wheeler et al., 2022; Reeves et al., 2021; Krocze et al., 2023). Likewise, observing confident speakers and modeling effective communication behaviors can enhance self-efficacy through vicarious learning (Maulidha, 2023). Moreover, receiving constructive yet encouraging feedback whether from teachers, peers, or self-reflection has been associated with greater confidence and improved public speaking performance (Liu & Aryadoust, 2024). Additionally, assisting learners in reframing negative thoughts and developing coping strategies aligns with the Social Cognitive Theory's emphasis on self-regulation and reflective thinking (Ernst et al., 2024; Hao et al., 2024). By applying these principles, educators can create more effective teaching approaches that empower students to tackle public speaking challenges with confidence and resilience, as evidenced in recent studies across Malaysian and international contexts (Abdullah et al., 2024; Ch'ng et al., 2025).

Past Studies on Sources of Public Speaking Anxiety

Many studies have been conducted to investigate the sources of public speaking anxiety (PSA), particularly focusing on cognitive, behavioral, and situational factors that influence learners' fear of speaking in front of an audience. The study by (Limbago et al., 2020) examined the relationship between personality traits and communication apprehension among undergraduate students. Using a quantitative survey with 367 university students as respondents, the researchers employed the Personal Report of Communication Apprehension (PRCA-24) and a Big Five personality inventory. The findings revealed that students with higher levels of neuroticism and introversion were significantly more likely to experience public speaking anxiety. The implication is that personality-based interventions or tailored support strategies might be necessary to address PSA among students with specific personality traits. Similarly, a study by (Tamara et al., 2017) explored both trait anxiety and self-perceived communication competence among 212 Turkish university students using a mixed-methods design. Their results indicated that students with low perceived communication competence reported higher anxiety during oral presentations. This emphasizes the importance of building students' confidence and communication skills as a preventive strategy against PSA.

The study by (Muhibbah & Amalia, 2025) focused on identifying external classroom-related factors that contribute to PSA, such as classroom climate, teacher behavior, and peer evaluation. The study used a qualitative approach involving focus group interviews with 30 EFL (English as a Foreign Language) learners in Indonesia. The findings showed that unsupportive teacher behavior and fear of negative peer judgment were major sources of anxiety. These results imply that classroom dynamics play a significant role in shaping students' speaking confidence and that creating a supportive learning environment is essential. In a related study, (Halimah & Nuraida, 2025) used a survey instrument with 150 university-level students in Northern Cyprus to explore how past failure in public speaking, lack of practice, and audience size affected students' anxiety levels. They found that past negative experiences and lack of rehearsal opportunities had the strongest predictive value for high PSA. The implication is that repeated exposure to safe public speaking environments can significantly mitigate anxiety over time.

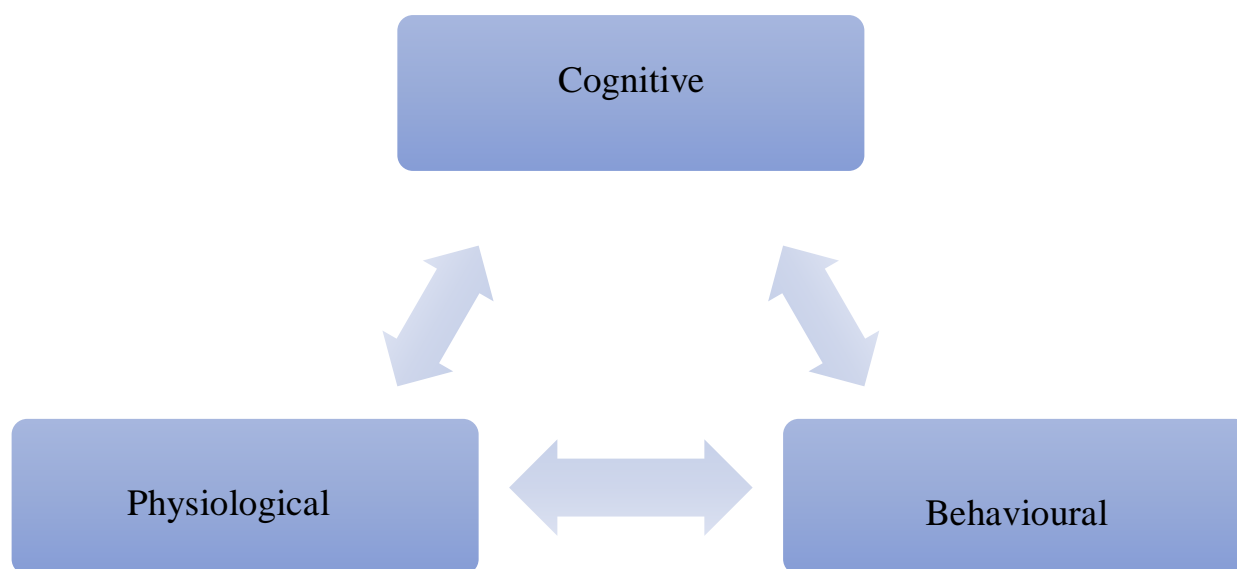
In the context of our current study, these insights serve as a compelling foundation for exploring how learners perceive their own anxiety and identifying the specific situational or psychological triggers that shape their behavior in public speaking scenarios. While previous studies have highlighted the sources of PSA, our research takes a significant step forward by incorporating Social Cognitive Theory. This innovative approach allows us to examine the interplay between self-efficacy and environmental feedback, shedding light on how they interact with anxiety-inducing factors. By doing so, we aim to provide a deeper understanding of PSA and pave the way for effective intervention strategies that empower individuals to overcome their fears and thrive in public speaking situations.

Conceptual Framework of the Study

We have at one time, or another feared public speaking or any oral presentation. While many of us survived the fear and found coping strategies. Fear of oral presentation is caused by trait and state apprehension (Rahmat, 2019). Trait apprehension refers to a personality trait that displays anxiety across many situations. This person may be anxious or uncomfortable in a public communication setting such as public speaking or oral presentation. It does not matter who the audience is. Next, state apprehension refers to the feeling of anxiety in certain situations and settings. For example, some people are more anxious speaking in front of a crowd they know compared to the crowd of strangers.

Fig. 1 shows the conceptual framework of the study. This study replicates the public speaking anxiety by Bartholomay & Houlihan (2016). They state that there are three factors for public speaking anxiety. The first is cognitive factor and this refers to the person believing that giving the speech is terrifying. This person is afraid he /she will embarrass himself/herself in front of the audience. The next factor is behavioural factor. This is evident when the speaker fidgets before a speech or even finds it difficult to make eye contact with the audience. The last factor is physiological. The speaker may feel sick before giving a speech. He/she could feel tense before presenting. This study also explores the relationship between all factors in the public speaking anxiety (refer to Fig. 1 below).

Fig. 1- Conceptual Framework of the Study Relationship of all factors in public speaking anxiety



METHODOLOGY

This quantitative study is done to investigate sources of fear of public speaking. A convenient sample of 121 participants responded to the survey. The instrument used in this study was a structured questionnaire adapted from Bartholomay and Houlihan (2016). It comprised 17 items categorized into three domains: cognitive (8 items, $\alpha = .924$), behavioural (4 items, $\alpha = .859$), and physiological (5 items, $\alpha = .880$). Items were rated on a 5-point Likert scale ranging from 1 (Never) to 5 (Always). Cronbach's alpha was .952, indicating high internal consistency. A copy of the questionnaire is provided in Appendix A.

Table I Likert Scale Use

1	Never
2	Rarely
3	Sometimes
4	Very Often
5	Always

Table II Distribution of Items in the Survey

No	Variable	Sub-Category	Cronbach Alpha
B	Cognitive	8	.924
C	Behavioural	4	.859
D	Physiological	5	.880
	Total Items	17	.952

The findings of this study strongly align with Social Cognitive Theory (SCT) as proposed by Bandura (1986). The higher mean score in the cognitive dimension ($M = 3.4$) indicates that self-efficacy beliefs and fear of negative evaluation were central to students' public speaking anxiety, reflecting SCT's emphasis on personal factors. Behavioural indicators ($M = 3.2$), such as avoidance and difficulty maintaining eye contact, demonstrate how internal beliefs manifest in observable actions. Physiological symptoms ($M = 3.1$), such as a pounding heart and sweating, highlight the environmental triggers that reinforce self-perceptions of inadequacy. Collectively, these results illustrate SCT's principle of reciprocal determinism, in which personal, behavioural, and environmental factors interact to shape students' experiences of anxiety.

FINDINGS

Demographic Analysis

Table 3 Percentage for Demographic Rules

Question	Demographic Profile	Categories	Percentage (%)
1	Gender	Male	50%
		Female	50%
2	Academic Field	Social Sciences	70%
		Sciences	30%
3	Self-Rating English Proficiency	Advanced	3%
		Good	41%
		Moderate	49%
		Non Speaker	7%

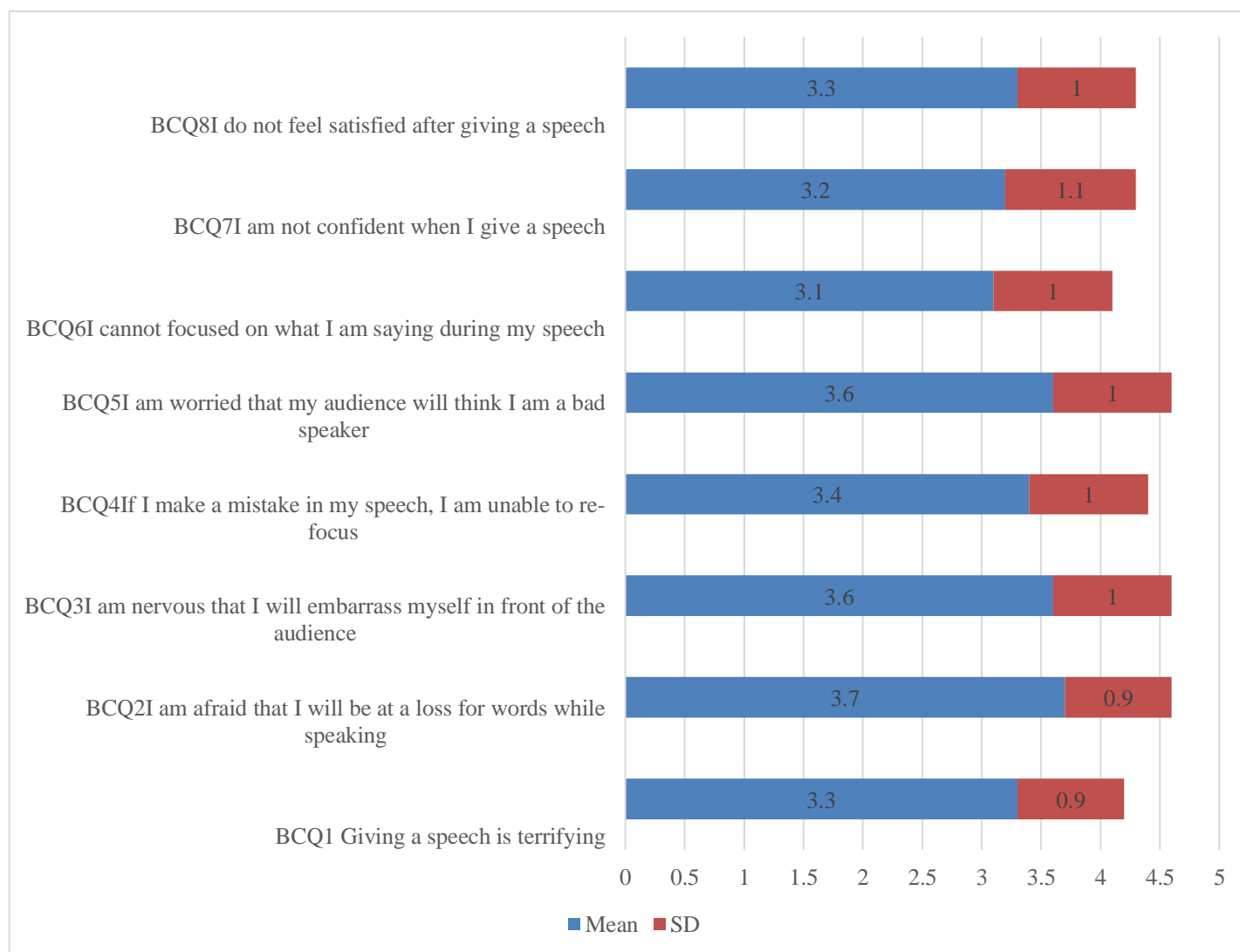
The demographic analysis of the respondents shows a balanced gender distribution, with equal proportions of male (50%) and female (50%) participants. Regarding academic backgrounds, a majority of the respondents (70%) came from the field of Social Sciences, while the remaining 30% were from the Sciences. When it comes to self-rated English language proficiency, most participants assessed their skills as moderate (49%) or good (41%). A smaller percentage considered themselves advanced speakers (3%), and 7% identified as non-speakers. This distribution indicates that the sample consists of a diverse group of learners with varying levels of linguistic confidence and academic exposure, potentially influencing how they experience and respond to public speaking tasks.

Descriptive Statistics

Findings for Cognitive Aspects

This section presents data to answer research question, How does cognitive aspects influence public speaking anxiety?

Fig. 2- Mean for Cognitive aspects



The findings for the cognitive aspect of public speaking anxiety reveal that learners frequently experience negative thought patterns and mental distress during speaking tasks. The highest mean score was reported for the item "I am afraid that I will be at a loss for words while speaking" ($M = 3.7$, $SD = 0.9$), indicating a strong fear of mental block or disfluency. This is closely followed by concerns about embarrassment ($M = 3.6$, $SD = 1.0$) and audience judgment ($M = 3.6$, $SD = 1.0$), reflecting a significant preoccupation with negative evaluation. Other notable concerns include difficulty re-focusing after making a mistake ($M = 3.4$, $SD = 1.0$) and feelings of terror associated with giving a speech ($M = 3.3$, $SD = 0.9$). Learners also reported moderate levels of dissatisfaction post-speech ($M = 3.3$, $SD = 1.0$), lack of confidence ($M = 3.2$, $SD = 1.1$), and difficulty concentrating while speaking ($M = 3.1$, $SD = 1.0$). Overall, the cognitive data suggest that anxious thoughts—such as fear of failure, lack of confidence, and concern over audience perception—are dominant contributors to public speaking anxiety among learners.

Findings for Behavioural Aspects

This section presents data to answer research question 2- How does behavioural aspects influence public speaking anxiety?

Fig. 3- Mean for behavioural aspects

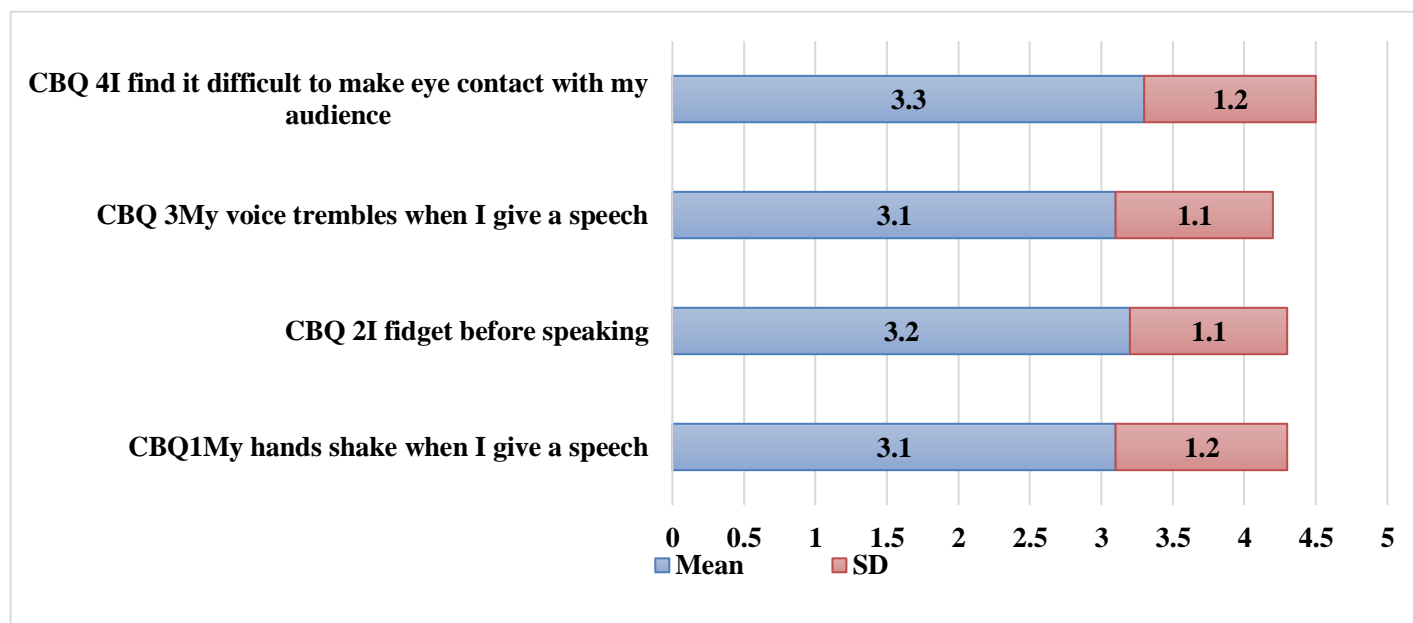
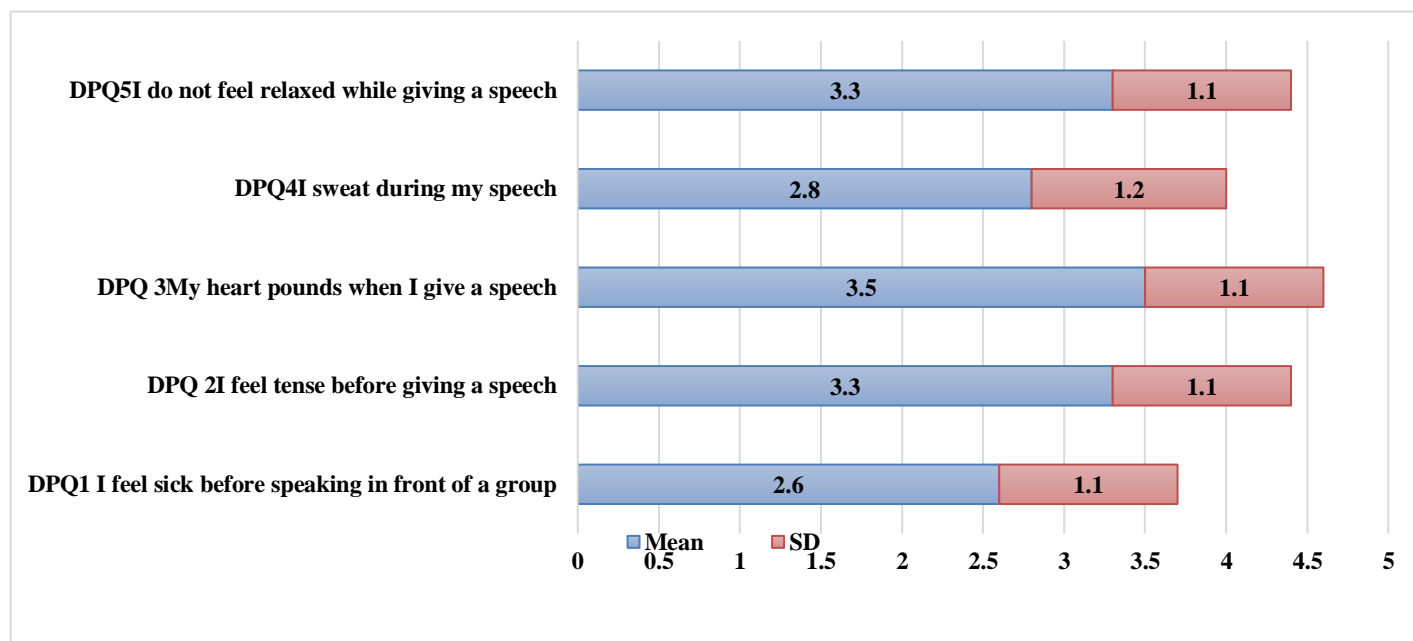


Figure 3 presents the mean for behavioural aspects. The highest mean is item 3 (mean=3.3, SD=1.2) which states that learners found it difficult to make eye contact with the audience. Item 3 (mean=3.1, SD=1.1) has the lowest means and it states that the learners' voice trembles when they gave the speech.

Findings for Physiological Aspects

This section presents data to answer research question 3- How does physiological aspects influence public speaking anxiety?

Fig. 4: Physiological aspects influence public speaking anxiety



The findings related to physiological aspects of public speaking anxiety reveal that learners commonly experience a range of physical symptoms when required to speak in public. The highest mean score was recorded for the item "My heart pounds when I give a speech" ($M = 3.5$, $SD = 1.1$), indicating that increased heart rate is a prominent physical response among participants. Similarly, learners reported feeling tense before giving a speech ($M = 3.3$, $SD = 1.1$) and not feeling relaxed during the speech itself ($M = 3.3$, $SD = 1.1$), suggesting a persistent state of physical discomfort throughout the speaking process. Sweating during speeches also appeared

to be moderately common ($M = 2.8$, $SD = 1.2$), while the least reported symptom was feeling sick before speaking ($M = 2.6$, $SD = 1.1$), although it still reflects a noticeable level of pre-speech distress. Overall, these results suggest that physiological symptoms—especially elevated heart rate and muscular tension—play a significant role in learners' experience of public speaking anxiety.

Mean Difference

This section presents the data to answer research question 4- How do the means differ for different aspects of public speaking anxiety?

Table 5 mean Difference

TYPE OF SPEAKING ANXIETY	TOTAL MEAN
COGNITIVE	3.4
BEHAVIOURAL	3.2
PHYSIOLOGICAL	3.1

The analysis of mean differences among the three aspects of public speaking anxiety—cognitive, behavioral, and physiological—indicates that learners experience varying intensities of anxiety depending on the dimension. The highest overall mean was recorded for cognitive anxiety ($M = 3.4$), suggesting that learners are most affected by mental and emotional responses such as fear of negative evaluation or self-doubt during public speaking. This is followed by behavioral anxiety ($M = 3.2$), which reflects observable reactions like hand shaking or speech avoidance. Physiological anxiety registered the lowest mean ($M = 3.1$), indicating that although learners do experience physical symptoms such as increased heart rate or tension, these are slightly less dominant than the cognitive and behavioral components. These mean differences suggest that public speaking anxiety is experienced most strongly at the cognitive level, highlighting the importance of addressing thought patterns and internal beliefs in anxiety-reduction strategies.

CONCLUSION

Summary of Findings and Discussions

Three aspects of public speaking anxiety (PSA) were examined in this study: cognitive, behavioural, and physiological. The participants were undergraduate students from Malaysia. According to the findings, anxiety was felt on all three levels, with the cognitive component predominating.

Cognitive of PSA.

The greatest impact on PSA was found to be cognitive, with participants commonly expressing concerns about forgetting lines, embarrassment, and receiving a poor audience rating. The fear of running out of things to say was the most frequently mentioned item. These results corroborate those of Gallego et al. (2021), who highlighted the importance of negative cognitive appraisals in causing anxiety related to public speaking. This is in line with Bandura's Social Cognitive Theory (1986), which highlights how self-efficacy and self-reflection influence emotional reactions. Further emphasising the importance of cognitive processes in public speaking situations, Tanveer, Mahmud, and Khan (2023) discovered that cognitive-behavioral reframing dramatically lowers PSA in college students.

Behavioral Dimension of PSA

Moderately noticeable behavioural symptoms included trembling voice and trouble maintaining eye contact. These behavioural manifestations are consistent with research by Muhibbah and Amalia (2025), who found that preparation anxiety and avoidance behaviours were important among EFL learners. The importance of personality in influencing PSA expression was further supported by the study by Limbago et al. (2020), which also found that students with higher introversion levels typically display more pronounced behavioural indicators of apprehension.

Physiological Dimension of PSA

Although less prevalent, physiological symptoms in particular, elevated heart rate and tense muscles were nonetheless noteworthy. During speech, a racing heart was the most frequently reported physiological reaction. These findings support the research conducted by Demir and Kan (2025), which confirmed the unique function of physiological arousal in PSA. In a similar vein, Gallego et al. (2021) found that physiological markers are essential to the multifaceted experience of PSA, despite being less noticeable than cognitive responses.

Comparison Across Dimensions

Cognitive anxiety ($M = 3.4$) outperformed behavioural ($M = 3.2$) and physiological ($M = 3.1$) dimensions, according to comparative analysis. This result is consistent with Tamara et al. (2017), who observed a strong correlation between PSA and low self-perceived competence. Similarly, Sana et al. (2024) emphasised that anxiety in oral tasks is significantly influenced by low self-efficacy. However, demographic factors like gender and academic year might be more accurate predictors in some situations, according to Lintner and Belovecová (2024), indicating that academic and cultural contexts affect the hierarchy of anxiety dimensions. Implications and Suggestions for Future Research. These findings reinforce the application of Social Cognitive Theory (Bandura, 1986) in the context of PSA. The dominance of cognitive anxiety highlights the importance of self-efficacy and cognitive appraisals in shaping students' speaking experiences. The results also extend the model proposed by Bartholomay and Houlihan (2016), reaffirming that cognitive distortions such as fear of judgment and negative self-talk are central to PSA among Malaysian undergraduates. This supports the argument for integrating SCT-based interventions into educational practices to reduce anxiety.

Pedagogical Implications

The results have significant ramifications for higher education teaching methods. There are a multitude of strategies that educators can employ to help students overcome their apprehension about public speaking. Incorporating progressive, low stakes speaking opportunities, such as brief classroom seminars or group presentations, is one approach to fostering students' confidence over time. This method offers opportunities for mastery. Vicarious learning is another effective method that entails students observing their peers who demonstrate confident speaking abilities. This peer modelling reinforces self-efficacy through social learning, thereby increasing students' confidence in their capacity to achieve success. Furthermore, it is imperative to offer constructive, growth-oriented feedback that prioritises progress over errors. This will reduce students' anxiety about receiving negative evaluations. Ramasamy, Hashim, and Yunus (2022), who emphasised the importance of supportive learning environments in managing PSA, support these strategies. Technology-based training can also be advantageous, as it enables students to rehearse their presentations in secure, controlled environments by utilising tools such as virtual reality or video recording. Collectively, these strategies are in accordance with Social Cognitive Theory (SCT) in that they enhance self-efficacy, alter the social environment, and restructure behavioural responses to mitigate public speaking anxiety.

Suggestions for Future Research

Control variables such as gender, language proficiency, and cultural background can provide deeper insights into patterns of public speaking anxiety. In this study, language proficiency appeared particularly relevant: students with moderate or low English proficiency reported higher levels of anxiety, consistent with prior studies linking linguistic competence to self-efficacy. Although gender distribution was balanced, previous research suggests women may exhibit higher levels of communication apprehension than men (Lintner & Belovecová, 2023). Future studies could expand this analysis by incorporating cultural background and academic discipline as moderating factors, potentially uncovering nuanced patterns of anxiety across diverse student populations.

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APPENDIX

Appendix A

PUBLIC SPEAKING ANXIETY QUESTIONNAIRE

Title: Public Speaking Anxiety Among Students

Introduction

This questionnaire is designed to measure your experiences and feelings related to public speaking. Please read each statement carefully and indicate how often it applies to you when you are preparing for or delivering a speech.

There are no right or wrong answers. Please answer honestly based on your personal experiences. Your responses will remain confidential and will only be used for research purposes.

Rating Scale:

1 = Never 2 = Rarely 3 = Sometimes 4 = Very Often 5 = Always

Section A: Demographic Profile

Q1. Gender (Mark only one)

- ☐ Male
☐ Female

Q2. Academic Field (Mark only one)

- ☐ Social Sciences
☐ Sciences

Q3. Self-Rated English Proficiency (Mark only one)

- ☐ Advanced
☐ Good
☐ Moderate
☐ Poor
☐ Non-speaker

Section B: Cognitive Dimension

Instruction: Please indicate how often each statement applies to you when preparing for or delivering a speech (1 = Never, 5 = Always).

No.	Statement	1	2	3	4	5
BCQ 1	Giving a speech is terrifying for me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BCQ 2	I am afraid that I will be at a loss for words while speaking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BCQ 3	I am nervous that I will embarrass myself in front of the audience.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BCQ 4	If I make a mistake, I find it hard to recover and continue smoothly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BCQ 5	I worry that the audience will think I am a poor speaker.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BCQ 6	I cannot stay focused on what I am saying during my speech.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BCQ 7	I am not confident when I give a speech	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BCQ 8	I do not feel satisfied after giving a speech.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section C: Behavioral Dimension

No.	Statement	1	2	3	4	5
CBQ 1	My hands shake when I give a speech.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CBQ 2	I fidget before speaking.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CBQ 3	My voice trembles when I give a speech.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CBQ 4	I find it difficult to make eye contact with my audience.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section D: Physiological Dimension

No.	Statement	1	2	3	4	5
DPQ 1	I feel sick before speaking in front of a group.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DPQ 2	I feel tense before giving a speech.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DPQ 3	My heart pounds when I give a speech.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DPQ 4	I sweat during my speech.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DPQ 5	I do not feel relaxed while speaking.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

We sincerely thank you for participating in this study. Your honest responses are greatly appreciated and will help us gain deeper insights into public speaking anxiety among students.