ANALYZING THE COGNITIONS, BEHAVIORS, AND PHYSIOLOGICAL MANIFESTATIONS OF PUBLIC SPEAKING ANXIETY AMONG EFL STUDENTS

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ABSTRACT

English as a Foreign Language (EFL) students frequently struggle with public speaking anxiety (PSA), which harms their ability to communicate and function academically. It also hinders their ability to articulate their ideas, especially when it comes to presenting them in public. This study investigates PSA's cognitive, behavioral, physiological manifestations and the effects on the participants. The study investigated the manifestations of those three factors among the 13 third-semester students of STKIP Agama Hindu Singaraja. Surveys, interviews, and observational studies were used to gather data from EFL students using both qualitative and quantitative methodologies. According to the results, cognitive symptoms include lack of confidence, feeling worried, feeling afraid, embarrassed and nervous. While behavioral manifestations include moderate eye contact, fidgeting, trembling and shaking hands. Physiological responses range from extreme sick feeling, feeling moderate and extreme tense before giving a speech, extreme heart pounding and slight sweating. These findings help educators mitigate PSA among EFL students. They also help EFL students become more confident to deliver and articulate ideas in front of public.

Keywords : *Public Speaking, Anxiety, Anxiety Manifestations*

INTRODUCTION

Public speaking, as the name suggests, requires people to speak and deliver ideas in front of many people. Mufanti et al. (2018) define public speaking as oral communication delivered before a large number of people that incorporated the skill of speaking and the art of speaking. Furthermore, Bilgin (2022) states that public speaking is the art of speaking effectively in front of a community. The incorporation of the skills and how the ideas are delivered makes public speaking a powerful tool, since it can influence and even entertain people. Public speaking also includes many forms of information delivery both in formal and informal settings, such as in debates, speeches, lectures and many more. In fact, public speaking serves many functions not only in academic field, but also in business, professional and social field. Being able to perform great public speaking not only improves personal and professional development but also boosts confidence. It also promotes critical thinking, and the ability to motivate and lead others.

However, many undergraduate students—particularly those who speak English as a foreign language (EFL)—feel uncomfortable to speak and deliver ideas publicly as it is very intimidating. If the students found themselves in threatening situations, anxiety emerges and it can be seen from many observant or non-observant symptoms (Gufriyansyah & Khairani, 2020). Public Speaking Anxiety (PSA) symptoms might be different in every individual; however, most people experience psychological and physiological symptoms. Furthermore, anxiety is manifested by disturbances of the mood, focus, thinking and behavior (Almokhtar A. Adwas et al., 2019). It also causes sleep irregularities, disturbances of social and/or occupational functioning, restlessness, feeling tense, being easily fatigued, muscle tension and blank mind. In some cases, the students may experience palpitation, trembling body and voice, excessive sweating and higher blood pressure.. Another barrier faced by EFL learners is lack of self-confidence. This aspect deals with psychological and attitudinal barriers that makes learner difficult to speak in foreign language (Tifani et al., 2020). Consequently, these symptoms may hinder students' ability to perform well in class as they cannot articulate and communicate their ideas to their peers

In EFL context, the problems do not just stop there. EFL learners must face language challenges including limited vocabulary, difficulties in pronunciation, and fear of making grammatical errors due to the fear of negative judgment by peers and instructors. Many learners feel insecure about their ability to speak English fluently and accurately due to these perceived limitations. Consequently, this insecurity intensifies their anxiety levels when required to speak. In their research, Normawati et al. (2023) showed that there are three major difficulties experienced by the students in speaking English, namely grammar, pronunciation and vocabulary. This research proves that learners are even more anxious using the language.

EFL students also face cultural barriers that contribute to Public Speaking Anxiety. In the world of different cultures, speaking styles and social norms may differ in each country. For example, people in certain countries may consider speaking by using directness and indirectness fashion. It causes reluctance in public speaking which consequently leads to poor performance in class. Meanwhile, in a country where hierarchical status is a matter of importance, it may discourage students to speak in front of people who have higher authority. Mustamir (2024) wrote that modesty and maintaining face in social interactions are some cultural norms in Indonesia that are still emphasized. Indonesian students' reluctance in delivering ideas in front of public hinders their academic performance in class such as in speaking classes.

In addition to cultural factors, public speaking anxiety is also caused by a complex relationship between of behavioral, cognitive, emotional and physiological factors (Dincer et al., 2022). Cognitively, people could experience intrusive feelings of failure or being judged, which can lead to failure of articulating ideas in front of public. This barrier may cause students to pause, avoid speaking opportunities, or use filler words during a presentation. Consequently, it triggers physiological reactions, such as sweating, shaking hands, a shaky voice, and a faster heart rate. Together, these factors create negative barriers that emerge public speaking fear, making it quite challenging for EFL students to present ideas in public.

The results of a research conducted by Indahyanti et al., (2023) indicated that anxiety emerges from internal factors such as a tense and stiff body, a faster heartbeat, and the uncontrolled body movements. There are also external factors contributing, such as fear of being laughed at and getting a negative response from the public. This research also revealed that the main causes of anxiety are linguistic-related, such as lack of grammar knowledge, lack of vocabulary mastery, and failure to construct good sentences. Another research was conducted by Aulia (2022). It was concluded that most of EFL students' PSA at STKIP PGRI Banjarmasin was at a high level due to insecurities of making mistakes when they were performing public speaking in class. They were also worried of having negative evaluations from the teachers and their peers after performing the public speaking activity. Meanwhile, Sugiyati & Indriani (2021) found that most of the students agreed that fear of negative evaluation becomes the major anxiety-provoking factor. A more recent study conducted by Ajiza et al. (2024) showed that EFL students are still having a high level of speaking anxiety. Factors affecting language anxiety include lack of confidence, inadequate English proficiency, fear of people's judgment, shyness, insecurities, and introverted personality.

Based on the observation in the third semester class of STKIP Agama Hindu Singaraja, most of the students show reluctance in performing public speaking. Most students also showed their anxiety when it comes to speaking in public. Some observable symptoms include nervousness, trembling voices, shaking hands and pale faces. When the students were investigated why they experienced those symptoms, most of the students said that they were worried about other people's negative judgment. The students also felt insecure about their grammar and pronunciation.

Based on the observation and previous studies on the same topic, this study formulates a research question: What are the cognitions, behaviors, and physiological manifestations of public speaking anxiety among EFL students? This study was conducted in regard of the researcher's curiosity of symptoms of the three aspects, namely cognition, behaviors and physiology during speaking in public. This study also investigates manifestations of cognitive, behavioral and physiological symptoms because students always feel reluctant to speak English in public, hence their ability in using the language. In fact, some students actually possess an adequate English skill; however, they still feel insecure in using the language publicly. Based on this phenomenon, it is important to study their level of anxiety to further understand the causes for the betterment of the class in the future, particularly speaking-related classes.

METHOD

This study employed a mixed-method research approach to investigate and analyze the causes of public speaking anxiety among third-semester students of the English Language Education program at STKIP Agama Hindu Singaraja. Creswell & Creswell (2018) stated that the

mixed-method approach integrates both quantitative and qualitative data collection techniques, providing a comprehensive understanding of the factors contributing to public speaking anxiety. Through surveys and interviews, this method aims to understand the underlying factors contributing to anxiety.

Research design

This study used convergent mixed methods design to gather data simultaneously both from quantitative and qualitative data. Creswell & Creswell (2018) stated that in this design, both forms of data are collected roughly at the same time to integrate information to enrich the interpretation of the overall results. In the quantitative data, the percentage of anxiety factors is identified. Meanwhile, the qualitative data provides in-depth insights into students' experiences and perspectives. By utilizing this method, the researcher received valuable information that is more convincing to investigate the causes of public speaking anxiety among the students.

Population and Sample/ Participants of the Study

The participant of this study is the 13 third-semester students in the English Language Education program of STKIP Agama Hindu Singaraja in the academic year of 2024-2025.

Research Instrument

A questionnaire was employed as the instrument for data collection. The questionnaire used in this research was adapted from Public Speaking Anxiety Scale composed by Bartholomay & Houlihan (2016). The questionnaire contains 17 items with 5-point Likert scale which aims to investigate cognitive (8 items), behavioral (4 items) and physiological (5 items) factors affecting the anxiety. The category of the Likert scale can be seen in the table below:

Table1. Likert scale adapted from Bartholomay & Houlihan (2016)

Scale	Meaning
1	Not at all
2	Slightly
3	Moderately
4	Very
5	Extremely

After the results of the questionnaire were obtained, the next data were collected by using interview guidelines. The students were interviewed by using interview guideline which emphasizes more on the causes of public speaking anxiety. The interview includes open-ended questions to allow students to express their thoughts in detail. Key questions include: 1) What situations or factors make you feel anxious about delivering speech in public? 2) Can you tell and describe an experience when you felt anxious when delivering speech in public?

Data Collection

The questionnaire was distributed by using Google Forms link to the participants. Students are given a clear explanation about the purpose of the study and guaranteed that their responses will be confidential. After the data of the questionnaire was obtained, an interview was conducted to dig deeper the causes and the underlying factors of public speaking anxiety.

Data Analysis

The questionnaire results obtained from the participants were compiled and translated into a table. Then, the researcher categorized the responses based on the 5-point Likert scale (1-5). The frequency of each statement for each Likert scale is calculated to get the percentage of the total response obtained from the participants. Each Likert scale's percentage is calculated by using the formula:

$$Percentage = \frac{Frequency}{Total\ response}\ x\ 100$$

The percentage statements with high percentages indicate significant causes of public speaking anxiety. Furthermore, comparisons between factors (cognitive, behavioral and physiological factors) help identify which category is most influential. By comparing the results, the factors affecting public speaking anxiety can be more investigated.

Meanwhile, the qualitative data was analyzed by transcription, familiarization, note-taking and highlighting the obtained data. After the interview was finalized, the interview results were transcribed to ensure the accuracy. The audio recordings were then listened multiple times and transcribed carefully to familiarize the researcher with the data. The transcribed data was then read carefully and highlighted. If necessary, some notes were made to enrich interpretation.

RESULTS AND DISCUSSIONS

Results

Based on the questionnaire results obtained from the participants, the researcher presented the findings through the process of calculating and presenting the resulting data, as shown in Table 2.

Table 2. The percentage of each Likert item

No	Item	Factors	Percentage (%)				
			1	2	3	4	5
1	Giving a speech is terrifying	Cognitive	15.4	30.8	7.7	7.7	38.5
2	I am afraid that I will be at a loss for words while speaking	Cognitive	15.4	15.4	15.4	23.1	30.8
3	I am nervous that I will embarrass myself in front of the audience	Cognitive	15.4	7.7	30.8	15.4	30.8
4	If I make a mistake in my speech, I am unable to re-focus	Cognitive	23.1	15.4	23.1	30.8	7.7
5	I am worried that my audience will think I am a bad speaker	Cognitive	0	30.8	30.8	15.4	30.8
6	I am focused on what I am saying during my speech	Cognitive	15.4	23.1	23.1	30.8	7.7
7	I am confident when I give a speech	Cognitive	38.5	7.7	30.8	7.7	15.4
8	I feel satisfied after giving a speech	Cognitive	0	15.4	38.5	15.4	38.5
9	My hands shake when I give a speech	Behavioral	30.8	30.8	15.4	7.7	30.8
10	I feel sick before speaking in front of a group	Physiological	7.7	15.4	15.4	7.7	53.8
11	I feel tense before giving a speech	Physiological	7.7	7.7	30.8	23.1	30.8

12	I fidget before speaking	Behavioral	15.4	30.8	30.8	23.1	7.7
13	My heart pounds when I give a speech	Physiological	0	23.1	15.4	23.1	38.5
14	I sweat during my speech	Physiological	23.1	30.8	15.4	15.4	15.4
15	My voice trembles when I give a speech	Behavioral	15.4	23.1	23.1	30.8	7.7
16	I feel relaxed while giving a speech	Physiological	38.5	15.4	23.1	23.1	0
17	I do not have problems making eye contact with my audience	Behavioral	23.1	15.4	38.5	7.7	15.4

"1" = not at all, "2" = slightly, "3" = moderately, "4" = very, "5" = extremely

The questionnaire was distributed to all students in third semester after they received a lecture of Argumentative Speaking. During the class, the students were required to speak in front of their peers to deliver their argument. Based on the observation, the instructor felt that many students were reluctant to present their ideas. Then, the researcher explained the aims of the research to all the students who were willing joining the research as participants. On Thursday, 21st of November 2024, the researcher distributed a Google Form link to the students containing the questionnaire and immediately filled out online by the 13 participants. The results of the questionnaire were recapitulated and summarized automatically by the Google Form system by counting the percentage of each Likert item.

From the table above, it can be seen that the questionnaire investigates the cognitive, behavioral and physiological factors of Public Speaking Anxiety. Cognitively, most of the students found that giving a speech is terrifying. It was shown that 38.5% students feel that it is extremely terrifying. Also, 30.8% students also feel that they were extremely afraid of losing for words while speaking. Interestingly, 30.8% of students moderately feel nervous that they will embarrass themselves in front of the audience. Similarly, 30.8% students feel extremely nervous in front of the audience. In regard of refocusing after making a mistake during a speech, 30.8% students feel very hard to do so.

Students also feel that they are slightly, moderately and extremely worried that the audience will think he or she is a bad speaker. It was shown that 30.8% of students thought so. Also, 30.8% students are focused on what he or she is saying during a speech. On the other hand, 38.5% of students are not at all confident when giving a speech and extremely satisfied after giving a speech. This indicates that the students were not confident during a speech, but feel extremely relieved after that. It also indicates that speaking in public makes people feel unsafe and insecure.

In relation to behavioral patterns of public speaking anxiety, 30.8% of students do not experience shaking hands during a speech. However, the same percentage also shows that students experience a slight and extreme shake on their hands during a speech delivery. Students also fidget before a speech performance. This was experienced by 30.8% of students, who slightly and moderately fidget before speaking in public. Meanwhile, it was also shown that 30.8% of students were very trembling when giving a speech. In relation to eye contact during speech, 38.5% moderately thought that they do not have problems making eye contact with the audience.

Physiologically, 53.8% students feel sick before speaking in front of a group. It means that more than half of the research population experience it. Furthermore, 30.8% students feel tense before giving a speech. Also, 38.5% students feel extreme heart pounding when giving a speech.

The students also experience a slight sweating during a speech; it is indicated by the number of 30.8%. The last but not least, 38.5% students do not feel relaxed while giving a speech at all.

Meanwhile, the results of the interview revealed that students often feel anxious during public speaking due to lack of confidence. Other students also stated that fear of being judged, fear of making mistakes, feeling worried about audience's feedback or disapproval, negative reactions from the audience are some of the causes of public speaking anxiety. Meanwhile, lack of preparation and practice time also contribute to the students' anxiety. It was also mentioned that students often feel anxious due to not used to being seen by many people and formal setting might be intimidating.

The second interview question explores students' experience when they felt anxious during speaking in public. Most of the students revealed that they feel nervous and trembling, shaking and feeling insecure due to inadequate English skills. A student depicted an experience vividly, where a sense of trembling and nervousness can be clearly felt during speaking. Some symptoms experienced by the students include racing heart, sweated palm, stammering and trembling voice.

Based on these findings, it can be seen that public speaking anxiety can be assessed by cognitive, behavioral and physiological manifestations that emerge during public speaking. In other words, anxiety related to public speaking results from a close interconnection of cognitive, behavioral, and physiological elements that might hinder performance and personal development.

Discussion

The findings of this study emphasize the connection between cognitive, behavioral and physiological manifestations which contribute to public speaking anxiety among EFL students, particularly in STKIP Agama Hindu Singaraja. The first important factor is cognitive, which is closely related to thinking, reasoning and imagining. As one of the contributing factors in public speaking anxiety, cognitive plays an important role in the success of speaking performance in public. In fact, cognitive is a learning strategy that can maximize English learning (Jannah & Wardah, 2022). In their research, they further investigated cognitive as an effective learning strategy and found that it contributes medium level of usage when the students learn English.

However, when it comes to public speaking, EFL students experienced many negative self-perceptions that hinder their performance; such as worrying, feeling terrified, and nervous. In the research findings, some cognitive-related attitudes that have high percentage include "giving a speech is terrifying" or "I am afraid that I will be at a loss for words while speaking". Another attitude in cognitive aspect is "I am nervous that I will embarrass myself in front of the audience". Students also experienced cognitive distortions such as "I am worried that my audience will think I am a bad speaker" and overgeneralization (e.g., "if I make a mistake in my speech, I am unable to re-focus").

The three remaining items that are cognitive-related deal with students' focus, confidence and their satisfaction after delivering a speech. Based on the findings, it can be concluded that most of the students found it hard to stay focused during speech delivery. They also did not feel confident during a speech, and felt relieved and satisfied after giving a speech. These patterns indicate that these manifestations reinforce anxiety, making it quite challenging for EFL students to focus on their preparation and delivery. These findings align with Horwitz et al. (1986) who identified similar cognitive patterns in foreign language anxiety. These patterns also discussed

broadly in Bodie (2010) who mentioned that stage fear or performance anxiety can refer to anxiety experienced when performing in public.

In this research, there are some observable behavioral manifestations reported to be experienced by the students, namely shaking hands, fidgeting, trembling voices and eye contact. These may unintentionally indicate distress to the audience, possibly discouraging the speaker's confidence. A study was conducted by Gallego et al., (2022) that investigated distress tolerance in order to avoid longer presentation in public. It was revealed that students who report high levels of public speaking anxiety also give shorter presentations. Accordingly, speech duration represented a behavioral measure of distress tolerance. In relation to this study, those manifestations often result to students being in rush when delivering a speech in order to avoid the public's eyes. The manifestations of behavioral aspects of public speaking anxiety were also included in a study conducted by Wardani (2018). Based on the result of the observations and the interview, it can be concluded that the characteristics of anxious students can be divided into two which are observable symptoms and non-observable symptoms. Behavioral symptoms can easily be observed, such as trembling, avoiding eye contact, stammering or stuttering, playing with hair, playing with clothes, and nervously touching object. These observable symptoms are also found in this study which show an alignment and relevance to the behavioral factor investigated.

Meanwhile, the third factor, physiology, deals with the physical and biological reactions of the body to different stimuli. It particularly deals with body's automatic responses to stress, including elevated heart rate, perspiration, shaking, or dry mouth while performing in public. In this research, several symptoms were investigated whether or not the students experience them. Some physiological reactions include feeling sick before speaking in front of a group, feeling tense before giving a speech, pounding heart when giving a speech, sweating during a speech, and feeling relaxed while giving a speech. The findings of the research show that feeling sick before speaking in front of a group tops the percentage. It indicates that many students feel nauseous before performing in front of public. These physical symptoms might worsen cognitive disturbances in EFL students, such as trouble remembering words or forming solid sentences under pressure. Thus, this physiological stimulation may continue a cycle in which anxiety is worsened by the worry of experiencing these symptoms.

Previous studies have been conducted to investigate physiological manifestations of public speaking anxiety. Nuridzdzati & Akhiriyah (2023) revealed that negative contributions included feeling anxious and uneasy about speaking in front of their peers, which caused them to show speaking anxiety symptoms (such as a faster heartbeat, blank, and stammered speech) when expressing their thoughts, being reluctant to speak because of a weaker student-teacher bond, and having trouble retrieving their memory when speaking. Sugiyati & Indriani (2021) also found that 88.2% of their research participants experienced heart pounding when they are going to be called on. Moreover, 55.8% of students experienced certain parts of their body feel very tense and rigid while speaking English. These previous research findings are in line with the findings of this research, where 53.8% students feel sick before speaking and 38.5% students experienced extreme heart pounding when giving a speech.

The study's findings highlight the important connections between the cognitive, behavioral and physiological components of public speaking anxiety. Negative ideas affect bodily reactions, which in turn affect how people behave. For example, a student's cognitive fear of making mistakes may result in physiological symptoms like rapid heartbeat or shivering, which in turn may cause avoidance actions like avoiding eye contact, fidgeting, speaking quickly or softly

(behavioral). In order to properly manage public speaking anxiety, it is essential to address all three elements in this cyclical relationship, not solely focuses on only one aspect. Gallego et al. (2022) argued that the effectiveness of using solely physiological reactivity measures to detect public speaking anxiety is not quite convincing. They also have been unable to identify physiological correlation to self- reported public speaking anxiety. Zuardi et al. (2013) revealed that their research showed that the Simulated Public Speaking Task (SPST) induced a significant increase in anxiety factor, but no significant increases in systolic blood pressure or heart rate. It indicates that addressing cognitive, behavioral and physiological aspects are very essential to provide better teaching speaking strategies for the students.

CONCLUSION

For EFL students, especially in STKIP Agama Hindu Singaraja, public speaking anxiety (PSA) is a major obstacle that affects their confidence, academic achievement, and language learning process as a whole. This study examines PSA from the perspectives of cognitive, behavioral, and physiological manifestations.

Cognitively, EFL students experiencing PSA feel that it is extremely terrifying. Other cognitive-related manifestations include feeling afraid, embarrassment nervous. They also thought that they are unable to refocus after making mistakes during speech. Students also feel that they are slightly, moderately and extremely worried that the audience will think he or she is a bad speaker. Also, 30.8% students are very focused on what he or she is saying during a speech. Meanwhile, 38.5% of students are not at all confident when giving a speech and extremely satisfied after giving a speech. Behaviorally, there are some manifestations shown by the students. Students experience a slight and extreme shake on their hands; they also fidget before speaking (slightly and moderately). During a speech performance, students tremble when giving a speech and moderately thought that they do not have problems making eye contact. Physiologically, symptoms like extreme sick feeling, feeling moderate and extreme tense before giving a speech, feeling extreme heart pounding when giving a speech and slight sweating during a speech were found during investigation. Students also not at all feel relaxed during a speech performance. These symptoms exacerbate their struggles, which lead to public speaking anxiety.

Based on the findings of this study, educators are encouraged to foster a supportive environment to mitigate PSA among EFL students. They also need to develop teaching strategies to create an environment where students feel safe to practice and make mistakes. Cognitively, educators can apply mindfulness strategy to get rid negative thoughts that can hinder students' development in public speaking. Behaviorally, teachers can use positive reinforcement and gradual practice to reduce avoidance tendencies. Physiologically, educator can mitigate public speaking anxiety by applying relaxation strategies, such as breathing technique that can normalize blood pressure and heart rate.

Future studies are advised to examine public speaking anxiety to enrich these research findings such as gender-related anxiety, cultural factors, and strategies to reduce anxiety in public speaking. By doing further studies, educators and researchers can help EFL learners to overcome anxiety in public speaking.

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