

Effects of Peer Presence on Performance Anxiety During Oral Presentations Among High School Students

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Abstract

Performance anxiety is an issue that is generally present among high school students, especially during oral presentations, when social assessment is also a major factor. The research problem of the current study was to investigate how the presence of peers influences performance anxiety and presentation results in 9th-grade students. A quasi-experimental research design was used with a total of 50 students categorized into two groups, which were to present in the presence and in the absence of peers, respectively. A structured Likert-scale questionnaire was used to measure performance anxiety, and a presentation performance rubric was used to measure presentation aspects, including clarity, confidence, body language, and audience engagement. Data collected were analysed using R software, where descriptive statistics, independent samples t-tests, correlation analysis, and reliability testing were used. The results showed that students who presented in the presence of their peers recorded a higher degree of performance anxiety than students who presented without their peers. Also, there was a significant difference between the presentation performance scores in the peer presence group. There was a significant negative relationship between performance anxiety and performance in the presentation which means that the greater the anxiety level, the poor performance of the students. The research concludes that peer presence is an influential element in terms of performance anxiety and presentation outcomes. These results demonstrate the importance of educators implementing the strategies to decrease anxiety, including gradual exposure, friendly classroom conditions, and confidence-building interventions. The research adds to the body of literature because it incorporates both social and psychological viewpoints and offers feasible implications on how to enhance student performance and well-being in classroom environments.

Keywords: Performance Anxiety, Peer Presence, Public Speaking Anxiety, Oral Presentation.

I. INTRODUCTION

1.1 Introduction of the study

Oral communication is an essential part of the educational process, particularly in secondary schools, where students are expected to share ideas, demonstrate their knowledge, and actively participate in classroom activities. Oral presentations are one among many academic activities that are used as a form

of evaluation and skill training. These games help students develop confidence, communication skills, and critical thinking abilities. Nevertheless, although oral presentations are important, they are most of the time related to high levels of anxiety among students.

Performance anxiety (also known as public speaking anxiety or communication apprehension) is a condition in which a person experiences nervousness, fear, and physiological arousal due to the need to be in front of a group of people (McCroskey, 1977; Bodie, 2010). This form of anxiety is mostly common among students, especially when it comes to oral presentations where they are supposed to speak in front of an audience under examiner circumstances. Studies have shown that one of the most prevalent types of anxiety among people is that of public speaking, which has a negative impact on academic performance and effectiveness in communication (Bodie, 2010).

Adolescence is a developmental stage characterized by heightened sensitivity to emotions and increased interest in social evaluation. Students at this age are more aware of how others, especially their peers, perceive them, and thus, they are more prone to fear in the context of performing in front of people (Steinberg, 2014). The group of peers poses an additional level of social pressure in the classroom, as students may be afraid of negative judgment, criticism, or embarrassment.

The availability of peers is also a major factor in influencing the emotional and behavioral reactions of the students during oral presentations. The social evaluation theory states that one feels more anxious as they think he/she is being watched and judged by others (Leary, 1983). Students form a very topical target group in a learning situation, and their presence may worsen the anxiety level, especially in adolescents and peers who are quite sensitive to the opinions of their peers.

There is empirical evidence of the correlation between anxiety and performance in speaking tasks. One of the studies that investigated the speaking anxiety of students revealed that those who had less anxiety managed to do better in the speech tasks, and those with high anxiety levels had poor results. In the same vein, studies on oral presentation have shown that there is a very close correlation between the anxiety of public speaking and other presentation delivery factors such as confidence, clarity, and engagement. These observations indicate that anxiety is not simply an emotional reaction but a serious element that can affect academic achievement.

Moreover, interaction patterns and learning environments may affect the level of anxiety in students. Research has indicated that participation anxiety and fear of evaluation may decrease student engagement and communication effectiveness, especially in an environment where students have to communicate in real time. This brings into focus the need to know how social and environmental influences, like the presence of peers, affect student anxiety and performance.

1.2 Significance of the Present Study

The relationship between peer presence and performance anxiety is an area that has not been sufficiently explored in the literature; therefore, the study contributes to the existing body of literature. It contributes to the study of the interaction of social (peer presence) and psychological (anxiety) influencing factors in a classroom setting. The results offer an understanding of the impact of peer dynamics on the performance of students in terms of emotional reactions and presentation. It assists teachers in determining some of the causes of performance anxiety and assists in the formulation of measures that can be used to alleviate

anxiety in the classroom environment. The research helps enhance the confidence of students, their ability to communicate, and their general moods. It presents practical implications on the teaching practices and classroom management so as to increase the engagement of the students.

1.3 Scope of the Present Study

The research is concentrated on high school students, the students of the 9th standard. It is performed in a classroom, with the help of oral presentations. The experiment looks at how the presence of peers influences performance anxiety and presentation performance. It takes into consideration both the beneficial and adverse effects of peer interaction on student performance. The research is confined to the educational setting and does not apply to work and professional settings.

II. REVIEW OF LITERATURE

Several studies have examined public speaking anxiety and its impact on students' performance in educational settings. Existing literature highlights the role of psychological factors such as self-efficacy, coping strategies, and communication skills, along with social influences like peer presence. These studies collectively provide a comprehensive understanding of the factors contributing to performance anxiety and possible intervention strategies.

Bauth et al. (2019) examined the relationship between social competence and public speaking anxiety among university students. Their findings revealed that individuals with lower social skills reported higher levels of anxiety, including fear of negative evaluation and self-doubt. In contrast, students with stronger communication abilities and prior exposure to speaking situations experienced lower anxiety. The study emphasizes that both perceived competence and experience significantly influence performance anxiety.

Reeves et al. (2021) conducted a meta-analysis on exposure-based treatments for public speaking anxiety. The results showed that both virtual reality exposure therapy and in vivo exposure are effective in reducing anxiety symptoms. Participants reported increased confidence and reduced physiological responses such as nervousness and rapid heart rate. The study also highlighted that avoidance of speaking situations can negatively impact academic development.

Ebrahimi et al. (2019) analysed psychological interventions targeting public speaking anxiety and found that cognitive-behavioural therapy and exposure-based techniques are highly effective. The study identified public speaking anxiety as a common form of social anxiety emerging during adolescence and emphasized the importance of early intervention to prevent avoidance behaviours and low classroom participation.

Marinho et al. (2022) reviewed instruments used to measure public speaking performance and anxiety. Their findings indicated that anxiety significantly affects communication aspects such as fluency, voice quality, and non-verbal behaviour. The study also pointed out the lack of standardized measurement tools and described public speaking as a psychosocial stressor due to audience evaluation.

Lestiono and Lee (2024) explored the effectiveness of virtual reality interventions in reducing speaking anxiety. They found that simulated environments provide a safe space for practice, helping students build confidence and improve performance. However, the study noted limitations such as the lack of long-term follow-up data.

Lestari et al. (2021) investigated the relationship between self-efficacy and public speaking anxiety, identifying a negative correlation between the two. Students with higher self-efficacy experienced less anxiety and perceived presentations as manageable tasks. The study also emphasized the role of audience feedback, where positive responses reduced anxiety and negative evaluation increased it.

Wati et al. (2022) assessed the effectiveness of Emotional Freedom Technique (EFT) in reducing public speaking anxiety. Their findings showed significant reductions in both psychological and physiological symptoms, highlighting the importance of addressing emotional and physical aspects of anxiety simultaneously.

Zacarin et al. (2019) examined the integration of behavioural therapy with virtual reality exposure. The study found improvements in confidence, fluency, and non-verbal communication, demonstrating the effectiveness of combining traditional and technological interventions.

Putri et al. (2024) reviewed group guidance methods and found that group-based interventions provide social support, enhance communication skills, and reduce feelings of isolation. These approaches improved confidence and helped students develop coping strategies.

Tee et al. (2020) explored coping mechanisms used by students, identifying strategies such as preparation, positive self-talk, and seeking support as effective in reducing anxiety. The study also noted that avoidance behaviours tend to increase anxiety levels.

Kart and Kart (2021) highlighted the role of peer presence in shaping social behaviour and emotional responses. Similarly, Nortvig et al. (2018) and Xie and Correia (2023) emphasized that peer interaction enhances engagement and motivation. However, Panadero and Alqassab (2019) found that identifiable peer presence can increase anxiety due to social pressure, while anonymity reduces stress. Bramoullé et al. (2020), Li and Wang (2022), and Alotaibi et al. (2023) further demonstrated that peer influence can have both positive and negative effects on student performance and emotional well-being.

Theoretical perspectives also support these findings. McCroskey (1977) defined communication apprehension as a key component of performance anxiety. Bodie (2010) explained the cognitive and physiological aspects of anxiety, while Steinberg (2014) highlighted adolescents' sensitivity to peer evaluation. Leary (1983) emphasized social evaluation as a major source of anxiety, and Zajonc (1965) introduced social facilitation theory. Additionally, the Yerkes-Dodson Law (1908) explains that moderate anxiety enhances performance, whereas excessive anxiety impairs it.

The existing literatures highlights that public speaking anxiety is influenced by both individual factors such as self-efficacy and social competence, and external factors like peer presence. While supportive environments and effective coping strategies can reduce anxiety, evaluative peer contexts may increase stress and hinder performance. Intervention methods such as exposure therapy and confidence-building techniques have proven effective in managing anxiety. Overall, a balanced approach addressing both psychological and social factors is essential to improve student performance and well-being.

III. METHODOLOGY

3.1 Research Objectives

- To find out the degree of performance anxiety among high school students while giving an oral presentation.
- To investigate the effect of the presence of peers on performance anxiety.
- To evaluate the difference in the performance of presentations given by high school students with and without the presence of peers.
- To investigate the relationship between performance anxiety and the performance of presentations. To make practical suggestions to educators to tackle the problem of performance anxiety.

3.2 Hypotheses

H01: There is no significant difference in performance anxiety between students presenting with and without peer presence.

H02: There is no significant difference in presentation performance between students presenting with and without peer presence.

H03: There is no significant relationship between performance anxiety and presentation performance.

3.3 Research Design

The present study adopted a quasi-experimental research design to examine the effect of peer presence on performance anxiety and oral presentation performance among high school students. This design enabled a comparative analysis between the two conditions, allowing the researcher to assess differences in anxiety levels and performance outcomes without random assignment.

3.4 Sample Design

The study utilized a non-probability sampling method, specifically convenience sampling. Participants were selected based on their availability and accessibility within the school setting. This approach was considered appropriate due to practical constraints such as time, resources, and ease of data collection. Although convenience sampling limits generalizability, it is commonly used in educational research for exploratory and comparative studies.

3.5 Sample size

The total sample size for the study consisted of 50 high school students. The sample included 30 males and 20 females, representing a mixed-gender population. The participants were equally divided into two groups, with 25 students in the Peer Presence group and 25 students in the No Peer Presence group. This equal distribution ensured balanced group comparison for analysing the impact of peer presence on performance anxiety and presentation outcomes.

3.6 Variables

- Independent Variable: Peer Presence (Peer Presence vs No Peer Presence)
- Dependent Variables: Performance Anxiety Score and Presentation Performance Score

3.7 Inclusion Criteria

- Students studying in 9th standard
- Students who were present during data collection
- Students who voluntarily agreed to participate

3.8 Exclusion Criteria

- Students absent during the study
- Students who did not complete the questionnaire

3.9 Tools Used

1. Performance Anxiety Scale

- 5 items
- 5-point Likert scale (Strongly Disagree to Strongly Agree)

2. Presentation Performance Rubric

- Criteria: Clarity, Confidence, Body Language, Content Relevance, Audience Engagement
- 5-point scale (Poor to Excellent)

3. Socio-Demographic Information

- Gender
- Group classification

3.10 Statistical tools used

The data collected was analysed using the R statistical software. The following statistical techniques were applied:

- Descriptive statistics (Mean with Standard Deviation)
- Independent Samples t-test
- Pearson Correlation Analysis
- Reliability Analysis (using Cronbach's Alpha)

3.11 Procedure

Prior permission was obtained from the school authorities. Students were divided into two groups. Group A presented in front of peers, while Group B presented without peer presence. Each student was assigned a topic and given time to prepare. After completing the presentation, students filled out the Performance Anxiety Questionnaire. The teacher evaluated each student's performance using a standardized rubric.

3.12 Ethical Considerations

Participants gave their consent. Participation was voluntary. Confidentiality was maintained. Students had a right to withdraw at any stage

IV ANALYSIS AND DISCUSSION

4.1 Analysis and Result

The collected data from the 50 high school students were tested using descriptive and inferential statistical methods.

The students were equally divided into two groups,

- Group A - Peer Presence (n = 25).
- Group B - No Peer Presence (n = 25)

Two key variables were considered,

- Performance Anxiety Score (using Likert scale)
- Presentation Performance Score (using rubric evaluation).

Mean, standard deviation, independent samples t-tests, correlation, and reliability were calculated in the R statistical software.

Table 1 : Descriptive Statistics (Mean ± SD)

Group	N	Anxiety	Performance
No Peer Presence	25	11.92 ± 2.6	18.84 ± 3.29
Peer Presence	25	19.4 ± 1.76	10.76 ± 2.13

The descriptive results in Table 1 show that the students in the Peer Presence condition had higher levels of anxiety (M = 19.40 ± 1.76) than the students in the No Peer Presence condition (M = 11.92 ± 2.60). However, the presentation performance score was lower in the Peer Presence group (M = 10.76 ± 2.13) than in the No Peer Presence group (M = 18.84 ± 3.29). These findings suggest that peer presence is associated with increased anxiety and decreased performance among students.

Table 2: Independent Samples t-test for Performance Anxiety

Variable	N	t_value	df	p_value
Performance Anxiety	50	-11.931	42	< 0.001

Using the independent samples t-test as shown in Table 2, a significant difference was found in levels of performance anxiety between the two groups (t = -11.931, df = 42, p < 0.001). This suggests that students who presented to their peers felt more anxious than students who presented alone. Thus, the null hypothesis (H₀₁) is rejected.

Table 3: Independent Samples t-test for Presentation Performance

Variable	N	t_value	df	p_value
Presentation Performance	50	10.318	41	< 0.001

As per Table 3 Students' presentation performance was also significantly different across the two groups ($t = 10.318$, $df = 41$, $p < 0.001$).

Students who performed the presentation without a peer present performed better than students who performed with a peer present. Thus, the null hypothesis (H_0) is rejected.

Table 4: Correlation between Anxiety and Performance

Variable	N	Correlation_r	P_value
Anxiety vs Performance	50	-0.684	< 0.001

The correlation analysis in Table 4 revealed a strong negative correlation between performance anxiety and performance in presentation ($r = -0.684$, $p < 0.001$).

This shows that as performance anxiety increases, performance in presentation decreases significantly. Hence, the null hypothesis H_{03} is rejected.

Table 5: Reliability Analysis

Scale	N	Number of Items	Cronbach Alpha
Performance Anxiety Scale	50	5	0.627

The Performance Anxiety Scale in Table 5 had a Cronbach's alpha coefficient of 0.627, suggesting that it has a moderate / acceptable level of internal consistency. Therefore, it can be considered a reliable measure of performance anxiety for high school students.

4.2 Discussion Based on Objectives

Objective 1: The findings indicate that performance anxiety is a common issue among high school students, especially during oral presentations. Students presenting in the presence of peers reported higher anxiety than those without peers, showing that such anxiety is a typical response in evaluative settings. This aligns with Bodie (2010), who identified public speaking anxiety as highly prevalent among students. Steinberg (2014) further explains that adolescents are particularly sensitive to social judgment due to developmental needs for peer acceptance. McCroskey (1977) described this as communication apprehension, which affects participation and performance. Classroom presentations, being public and evaluative, intensify feelings of vulnerability, making performance anxiety a significant educational concern.

Objective 2: The study found a significant increase in anxiety among students presenting in front of peers, indicating that peer presence acts as a strong social-evaluative stressor. This supports Leary's (1983) Social Evaluation Theory, which suggests that anxiety arises when individuals feel judged. Bauth et al. (2019) also highlighted fear of negative evaluation as central to public speaking anxiety. Similarly, Lestari et al. (2021) noted that audience feedback influences anxiety levels. Panadero and Alqassab (2019) found that identifiable peer presence increases pressure, while anonymity reduces anxiety. These findings confirm that peer presence significantly shapes students' emotional experiences.

Objective 3: Students performed better in the absence of peers, suggesting that increased anxiety negatively affects performance. The Yerkes-Dodson Law (1908) explains that while moderate anxiety may enhance performance, excessive anxiety impairs it. Marinho et al. (2022) found that anxiety affects fluency, voice, and non-verbal communication. Tee et al. (2020) also noted that poor anxiety management leads to lower performance. Although peer interaction can enhance learning (Nortvig et al., 2018; Kart and Kart, 2021), in evaluative contexts like presentations, it may act as a stressor rather than a facilitator.

Objective 4: A significant negative relationship was found between performance anxiety and presentation performance, indicating that higher anxiety leads to poorer performance. Ebrahimi et al. (2019) explained that anxiety disrupts cognitive functions such as attention and memory. Bodie (2010) also noted that anxiety reduces communication clarity and confidence. Reeves et al. (2021) showed that reducing anxiety improves performance outcomes. Anxious students tend to focus on fear and self-doubt rather than content delivery, creating a cycle where poor performance further increases anxiety.

Objective 5: The findings highlight the importance of classroom environment and peer dynamics. Alotaibi et al. (2023) emphasized that peer relationships can be both supportive and stressful. Korpershoek et al. (2016) found that positive classroom environments reduce stress and improve outcomes. Teachers can minimize anxiety by creating supportive settings, encouraging positive peer interactions, and providing constructive feedback. Gradual exposure to speaking tasks and collaborative activities can also help reduce evaluation pressure. Balancing peer interaction with psychological safety is essential.

The study demonstrates a strong link between social and psychological factors in shaping student performance. Peer presence, while beneficial for social learning, increases anxiety in evaluative contexts.

Peer Presence → Social Evaluation → Increased Anxiety → Reduced Performance.

V. SUMMARY

5.1 Conclusion

This study was conducted to examine the effects of peer presence on performance anxiety and presentation performance among high school students. Oral presentations are essential for developing communication skills; however, they often create significant anxiety, particularly in socially evaluative environments such as classrooms. A quasi-experimental research design was adopted, involving 50 ninth-grade students divided into two groups. One group presented in the presence of peers, while the other presented without peer presence. Data were collected using a structured performance anxiety scale and a presentation performance rubric.

The findings revealed that performance anxiety is a common issue among students during oral presentations. Notably, students who presented in front of their peers reported significantly higher anxiety levels compared to those who presented without peers. This indicates that peer presence acts as a strong social-evaluative factor, increasing self-consciousness and fear of negative judgment. As explained by Leary (1983), individuals tend to experience higher anxiety when they believe they are being evaluated by others. This effect is further intensified during adolescence, a stage characterized by heightened sensitivity to peer perception.

The study also found clear differences in presentation performance between the two groups. Students who presented without peers performed better in terms of clarity, confidence, body language, and audience interaction. This suggests that increased anxiety in the presence of peers negatively impacts performance quality. Supporting this, the Yerkes-Dodson Law (1908) explains that while moderate levels of anxiety may enhance performance, excessive anxiety can impair cognitive functioning. Similarly, Bodie (2010) and Ebrahimi et al. (2019) have shown that public speaking anxiety disrupts communication effectiveness, including fluency, memory recall, and message delivery.

A significant negative relationship was identified between performance anxiety and presentation performance, indicating that higher anxiety leads to poorer performance. Students with elevated anxiety levels often struggle with organizing their thoughts, maintaining concentration, and expressing ideas clearly. This highlights that performance anxiety is not merely an emotional response but a critical factor influencing academic outcomes.

Although previous studies (Nortvig et al., 2018; Kart & Kart, 2021) emphasize the positive role of peer interaction in enhancing engagement and learning, this study demonstrates that in evaluative situations like presentations, peer presence may act more as a stressor than a facilitator. Thus, peer presence has a dual role—it can support learning in collaborative contexts but increase anxiety in performance-based settings.

Overall, the study concludes that peer presence significantly influences both performance anxiety and presentation outcomes. Performance anxiety is shaped not only by individual psychological factors but also by the social environment in which students perform. The presence of peers creates a sense of evaluation and comparison, leading to increased anxiety and reduced performance.

These findings highlight important educational implications. Teachers should create supportive and non-threatening classroom environments to reduce anxiety and build confidence. Strategies such as gradual exposure to public speaking, encouraging positive peer feedback, and incorporating collaborative rather than competitive activities can help students manage anxiety effectively. In conclusion, addressing both emotional and social factors is essential for improving students' communication skills, academic performance, and overall well-being.

5.2 Limitations

- The study had a small sample size of 50 participants.
- The study was based on one school.
- The reliability of the anxiety scale was moderate.
- Individual factors, such as personality, were not taken into consideration.

- The quasi-experimental method does not allow for the control of external factors

5.3 Implications

- Teachers should create supportive and low-pressure presentation environments
- Gradual exposure to public speaking should be encouraged
- Confidence-building and anxiety management strategies should be integrated into teaching

5.4 Future Scope of Study

- Future studies can include larger and more diverse samples
- Longitudinal research can examine changes in anxiety over time
- Intervention-based studies can evaluate anxiety reduction techniques
- Individual differences such as personality and self-efficacy can be explored

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