Impact of Oral Presentation Skills Training on Glossophobia and Self-Esteem among Second-Year Allied Health Students in Karachi

Dr. Atiya Rohilla
Principal of Indus College of Medical Technology, Indus University of Health Sciences Indus Hospital and Health Care Network
atiya.rahman@tih.org.pk

Umer Javed
Lecturer, Indus University of Health Sciences Indus Hospital and Health Care Network
umerj678@gmail.com

Isra Noor
Lecturer, Indus University of Health Sciences Indus Hospital and Health Care Network
isra.noor921@gmail.com

Saania Akram
Lecturer Pharmacology, Indus University of Health Sciences Indus Hospital and Health Care Network
saaniaakram@gmail.com

Ghazal Adnan
Lecturer, Indus University of Health Sciences Indus Hospital and Health Care Network
ghazal.abkarim@gmail.com

Nazish Nizar
Lecturer, Indus University of Health Sciences Indus Hospital and Health Care Network
nazish.nizar@tih.org.pk

Naveen Taj
Instructor, Indus University of Health Sciences Indus Hospital and Health Care Network
naveentajj23452@gmail.com

ABSTRACT
This study investigates the impact of structured oral presentation skills training on glossophobia (fear of public speaking) and self-esteem among second-year Allied Health students in Karachi, Pakistan. Glossophobia is a prevalent issue affecting academic and professional performance, particularly in healthcare fields where effective communication is critical. Using a one-group pre-test–post-test design, the study assessed 60 students using the Personal Report of Public Speaking Anxiety (PRPSA) and the Rosenberg Self-Esteem Scale (RSES) before and after a six-session training intervention. Results revealed a significant reduction in glossophobia (t (59) = 16.39, p < 0.001) and a notable improvement in self-esteem (t (59) = -11.63, p < 0.001) post-intervention. However, no strong correlation was found between the two variables (r = 0.032, p = 0.81), suggesting independent improvements. The findings highlight the effectiveness of targeted training in mitigating public speaking anxiety and enhancing self-worth, aligning with prior research on

experiential learning and skill-building. The study underscores the need for integrating such interventions into Allied Health curricula to address communication barriers and foster confidence. Practical implications include recommendations for curriculum developers to incorporate scaffolded presentation practice, peer feedback, and psychosocial support to sustain long-term benefits. This research fills a gap in the South Asian context, offering evidence-based strategies to improve student readiness for clinical and professional communication.
Keywords: *Glossophobia, Public Speaking Anxiety, Self-Esteem, Oral Presentation Skills, Allied Health Students, Communication Training, Rosenberg Self-Esteem Scale, PRPSA, Experiential Learning, Curriculum Development.*

Introduction

The term "glossophobia," derived from the Greek words *glōssa* (tongue) and *phobos* (fear), refers to the intense fear of public speaking. It is considered one of the most prevalent phobias globally, affecting nearly 75% of the world's population (Tse, 2012; TengkuElmiAzlinaTengkuMuda, 2018). Studies consistently report that public speaking anxiety can often surpass even the fear of death for many individuals, with female students particularly vulnerable to higher levels of communication apprehension compared to their male counterparts (Tse, 2012; Nurul Fatinah Dellah, 2020). Among allied health students, this fear is especially critical, as effective communication is a core competency in clinical settings, directly influencing patient interaction, team collaboration, and overall care delivery.

In educational settings, glossophobia has emerged as a major barrier to student development, with recent research confirming that a large proportion of college students particularly in health and sciences suffer from various degrees of speech anxiety (Pratiwi et al., 2018). A local study in a private business school in Karachi revealed that 75% of students reported fear of public speaking, while 95% expressed the belief that this fear could be mitigated through targeted training and support mechanisms (Raja, 2017). For allied health students, glossophobia poses not only academic risks such as underperformance in oral assessments but also professional threats, including impaired bedside manner and reduced confidence in interdisciplinary communications. Researchers emphasize that the persistent fear of speaking in public can push learners into social withdrawal and avoidance behaviors, especially in high-pressure clinical environments (Khan et al., 2015; Hadjer, 2022).

A major psychological component intertwined with glossophobia is self-esteem, which shapes how individuals perceive their competence and self-worth in social and academic interactions. When students are encouraged to speak publicly, especially in structured educational environments, those with low self-esteem may experience intense self-consciousness and fear of ridicule, often leading to performance anxiety and communicative breakdowns (Hadjer, 2022; Dansieh et al., 2021). According to McCroskey (1977), contributors to communication apprehension include introversion, low self-esteem, and limited social exposure. In contrast, students with high self-esteem typically display lower levels of glossophobia, as they are more confident in expressing themselves publicly (Dansieh et al., 2021). Rosenberg's Self-Esteem Scale (1965) remains a widely used metric in evaluating these dynamics, and has been applied extensively to explore the negative correlation between self-worth and public speaking anxiety (Melanie C. Green, 2017; Mukesh Kumar, 2017).

While the debate on whether self-esteem directly influences academic performance continues (Al Awaji et al., 2022), there is growing consensus that oral presentation opportunities can be a

transformative educational tool. These structured speaking tasks not only help reduce speech-related anxiety but also contribute to improved self-perception and self-worth (Grieve, 2021). In allied health education, where verbal clarity and confidence are essential, oral presentations serve as more than assessment instruments they act as skill-building platforms for real-world clinical scenarios. Institutions must recognize that many students struggle with confidence and anxiety, and therefore, integrating systematic oral presentation training into the curriculum is both a preventive and developmental measure. Through regular feedback, performance scaffolding, and practice, students can gradually overcome glossophobia and enhance self-esteem before transitioning from academic to professional healthcare environments (Dellah et al., 2020).

Objectives of the Study

The present study is designed to:

1. Assess the baseline levels of glossophobia and self-esteem among second-year Allied Health Sciences students.
2. Evaluate the effectiveness of structured oral presentation skills training in reducing public speaking anxiety (glossophobia).
3. Determine the impact of oral presentation skills training on students' self-esteem.
4. Examine the statistical relationship between self-esteem and glossophobia scores post-intervention.

Rationale of the Study

Students enrolled in Allied Health Sciences programs frequently encounter challenges related to public speaking, which impedes their academic engagement and future professional interactions. Many report feeling uncomfortable when speaking before an audience due to underlying shyness, fear of judgment, or heightened self-consciousness—factors strongly associated with glossophobia (Dansieh et al., 2021). Despite the high prevalence of this issue, there is a significant lack of empirical data focusing on Allied Health students, particularly in the South Asian context.

Given the increasing reliance on verbal communication in healthcare education and clinical practice, it is essential to investigate how oral presentation training can mitigate glossophobia and enhance self-esteem. This study addresses a critical gap by generating evidence on the psychological and educational outcomes of targeted training. Furthermore, it aims to inform curriculum developers and educational planners on integrating supportive interventions into the academic framework of health sciences education.

Significance of the Study

This research holds educational, psychological, and institutional significance. It aims to contribute to a deeper understanding of glossophobia and its potential influence on students' self-esteem. The findings will serve as a resource for:

- Academic administrators, by encouraging the incorporation of Oral Presentation Skills Training into the curriculum to help students overcome presentation-related anxieties.
- Educators and facilitators, by guiding them to adopt interactive, student-centered pedagogies and workshops that directly address communication barriers.
- Students themselves, by fostering a supportive environment that cultivates confidence, reduces fear of public speaking, and promotes positive learning attitudes—particularly during oral assessments and presentations.

In essence, the study aims to bridge the gap between psychological preparedness and academic performance in Allied Health students.

Operational Definitions

1. **Glossophobia:**

Defined as the fear or anxiety of speaking in public. In this study, it quantitatively measured using the *Personal Report of Public Speaking Anxiety (PRPSA)* developed by McCroskey (1970) and McCroskey & Richmond (1998). Higher scores indicate greater anxiety.

2. **Self-Esteem:**

Refers to an individual's overall self-worth or personal value. It measured using the *Rosenberg Self-Esteem Scale (RSES)*, a 10-item tool widely validated in academic research to assess self-esteem levels.

3. **Oral Presentation Skills:**

The ability to effectively organize, articulate, and deliver verbal content to an audience. A self-designed evaluation rubric used to assess students' presentation performance before and after training.

Hypotheses

H_{01}: There is no significant difference in PRPSA scores before and after oral presentation skills training.

H_{11}: There is a significant difference in PRPSA scores before and after oral presentation skills training.

H_{02}: There is no significant difference in Rosenberg self-esteem scores before and after oral presentation skills training.

H_{12}: There is a significant difference in Rosenberg self-esteem scores before and after oral presentation skills training.

H_{03}: There is no correlation between PRPSA and Rosenberg self-esteem scores.

H_{13}: There is a significant correlation between PRPSA and Rosenberg self-esteem scores.

Research Questions

Primary Research Questions

1. What are the baseline levels of glossophobia (PRPSA scores) and self-esteem (Rosenberg scores) among Allied Health Sciences students?
2. Does oral presentation skills training significantly reduce glossophobia and enhance self-esteem?
3. Is there a significant correlation between glossophobia and self-esteem scores among the students?

Secondary Research Question

1. Is there a gender-based difference in glossophobia and self-esteem scores before and after the training intervention?

Material and Methods

Study Design

This study employed a one-group pre-test–post-test experimental design, enabling within-subject comparisons to assess the impact of an oral presentation skills training intervention. The design was chosen to evaluate changes in students' glossophobia and self-esteem levels before and after receiving structured training.

Study Setting

The research was conducted at the Indus College of Medical Technology and Allied Health, located in Karachi, Pakistan. The institution offers diverse programs in Allied Health Sciences, making it a

relevant setting for assessing communication-related educational outcomes in healthcare students.

Duration of the Study

The study was conducted over a 6 to 9-month period, commencing after receiving formal approval from the Institutional Review Board (IRB). This duration included the pre-intervention assessments, implementation of the training program, post-intervention evaluations, and data analysis.

Sample Size and Sampling Technique

A universal sampling technique was utilized, involving all second-year students enrolled in the Medical Technology program. The anticipated maximum sample size was 60 students, allowing for broad representation within the cohort. This approach ensured that the intervention reached all eligible participants without selection bias.

Inclusion and Exclusion Criteria

Inclusion Criteria

- All second-year students enrolled in the Medical Technology program at Indus College of Medical Technology and Allied Health during the academic year 2023.

Exclusion Criteria

- Students who did not provide informed consent for participation.
- Students who attended less than 65% of the scheduled Oral Presentation Skills Training sessions.

Variables

Dependent Variables (assessed pre- and post-intervention):

- Glossophobia scores, measured using the *Personal Report of Public Speaking Anxiety (PRPSA)* questionnaire.
- Self-esteem scores, measured using the *Rosenberg Self-Esteem Scale (RSES)*.
- Oral Presentation Performance, assessed using a self-developed presentation evaluation rubric designed to measure delivery, content organization, clarity, and confidence.

Independent Variable:

- Participation in a structured Oral Presentation Skills Training Program, delivered over a defined period with standardized content and evaluation metrics.

Data Collection Procedure

Data Collection Tools

To assess the variables under investigation, three validated instruments used:

Personal Report of Public Speaking Anxiety (PRPSA)

The PRPSA is a 34-item self-administered questionnaire designed to measure public speaking anxiety or glossophobia. Participants will respond on a 5-point Likert scale ranging from "strongly agree" to "strongly disagree." The total score ranges from 34 to 170. Anxiety levels are classified as follows:

- >131: High anxiety
- 98–131: Moderate anxiety
- <98: Low anxiety

This instrument distributed digitally via Google Forms to all participating students. The PRPSA is a pre-validated scale, previously used in multiple studies conducted at Karachi-based universities (Khan et al., 2015; Perveen et al., 2018), affirming its reliability and cultural relevance.

Rosenberg Self-Esteem Scale (RSES)

The RSES is a globally recognized 10-item scale designed to evaluate an individual's overall sense of self-worth. Responses are measured on a 4-point Likert scale, with higher scores indicating stronger self-esteem. A score below 15 reflects low self-esteem (Al Awaji et al., 2022). As a one-dimensional scale, it includes both affirming and negatively phrased items. The tool is open access and will also be administered via Google Forms.

Oral Presentation Rating Rubric

A self-developed rubric employed to assess students' oral presentation skills. This tool outlines key performance indicators, including content structure, clarity, delivery, confidence, and audience engagement. It has been designed based on best practices in medical education and presentation pedagogy (Hafner, 2003). The rubric introduced to students in advance, and its components explained to ensure transparency. Oral presentations evaluated by two experts from the Department of Medical Education, Indus University of Health Sciences, along with the principal investigator.

Pilot Testing

Prior to formal implementation, the PRPSA, RSES, and the oral presentation rubric pilot-tested with a group of 15 students from the previous academic batch. The goal is to ensure clarity, relevance, and internal consistency of the instruments for the target population. Pilot data used to refine the tools if necessary but will not be included in the final analysis.

Data Collection Process

The study will follow a two-phase data collection procedure:

Phase I – Pre-Intervention

- All second-year Allied Health students will complete the PRPSA and RSES questionnaires via Google Forms.
- Based on their scores:
  - Students with PRPSA >131 (high anxiety), 98–131 (moderate anxiety), and RSES <15 (low self-esteem) flagged for further attention.
  - Each student will attend a brief one-on-one session with the principal investigator to identify specific causes of glossophobia or low confidence.
  - Students who appear to require psychological support referred to the Psycho-Social Department at Indus University for appropriate counseling or intervention.

Phase II – Intervention: Oral Presentation Skills Training

- Students participate in a series of six oral presentation training workshops, conducted once per month throughout the semester.
- Training focus on the fundamentals of effective presentation delivery, audience engagement, and managing speech anxiety.
- After the third session, each student will deliver a practice presentation and receive formative feedback.
- Following the final workshop, students will deliver a final oral presentation, based on the same topic as their first, allowing for direct comparison.
- These final presentations evaluated using the rubric by two medical education experts and the principal investigator.

Phase III – Post-Intervention (End of Semester)

- After completing the entire training program and final presentation, the same students will again be asked to complete the PRPSA and RSES questionnaires.
- The pre- and post-training data analyzed to assess:
  - Reductions in glossophobia (PRPSA scores)
  - Improvements in self-esteem (RSES scores)
  - Performance changes in oral presentation delivery

This structured approach ensures a comprehensive understanding of how oral presentation training impacts both the psychological and communicative competencies of Allied Health students.

Data Analysis

Descriptive Analysis

All data were entered and analyzed using IBM SPSS Statistics software. Descriptive statistics utilized to summarize participant characteristics and baseline scores. For continuous variables such as PRPSA and Rosenberg scores, means and standard deviations calculated. For categorical variables, such as gender and attendance, frequencies and percentages reported. This will provide a clear profile of the study sample and baseline distributions.

Inferential Statistics

To evaluate the effectiveness of the oral presentation skills training intervention, inferential statistical analyses conducted:

- Paired sample t-tests applied to compare pre- and post-intervention scores of glossophobia and self-esteem.
- The Pearson correlation coefficient used to assess the strength and direction of the relationship between glossophobia (PRPSA scores) and self-esteem (Rosenberg scores).

A p-value of <0.05 considered statistically significant, indicating sufficient evidence to reject the null hypothesis.

Ethical Considerations

Prior to the commencement of the study, ethical approval obtained from the Institutional Review Board (IRB) of Indus University of Health Sciences. The principal investigator conduct an orientation session for all participants, clearly explaining the study objectives, research procedures, and expectations. Participation entirely voluntary, and all students and faculty involved required to sign an informed consent form.

To uphold confidentiality and anonymity, each participant assigned a unique identification code, and no personally identifiable information disclosed at any stage of the research. Data stored in password-protected digital files, accessible only to the principal investigator. The results reported in aggregate form, ensuring that individual identities cannot be traced. These measures are designed to comply with ethical research standards and to protect participants' privacy and dignity throughout the study process

Findings

The aim of this study was to examine the impact of oral presentation skills training on levels of glossophobia and self-esteem among second-year Allied Health students in Karachi. A total of 60 students participated, and pre- and post-intervention data were collected using the Personal Report of Public Speaking Anxiety (PRPSA) and the Rosenberg Self-Esteem Scale. The data were analyzed using SPSS, employing paired t-tests and Pearson correlation.

a. Change in Glossophobia (PRPSA Scores)

The average pre-intervention PRPSA score was notably high (M ≈ 135), indicating elevated levels of public speaking anxiety. Following the intervention, the post-intervention average PRPSA score significantly declined. The results of the paired t-test confirmed this reduction was statistically significant:

- $t(59) = 16.39$, $p < 0.001$

This suggests that the oral presentation training program had a meaningful effect on reducing glossophobia among the participants.

b. Change in Self-Esteem (Rosenberg Scores)

Before the intervention, the mean Rosenberg self-esteem score hovered around 14, which falls within the moderate-to-low self-esteem range. Post-intervention results showed a statistically significant increase in self-esteem scores:

- $t(59) = -11.63$, $p < 0.001$

This indicates that the intervention not only improved public speaking confidence but also enhanced students' overall self-worth.

c. Correlation between Glossophobia and Self-Esteem

Contrary to expectations, the correlation between post-intervention PRPSA and Rosenberg scores was weak and statistically insignificant:

- $r = 0.032$, $p = 0.81$

This finding suggests that although both constructs improved following the intervention, they did so independently without a strong linear association.
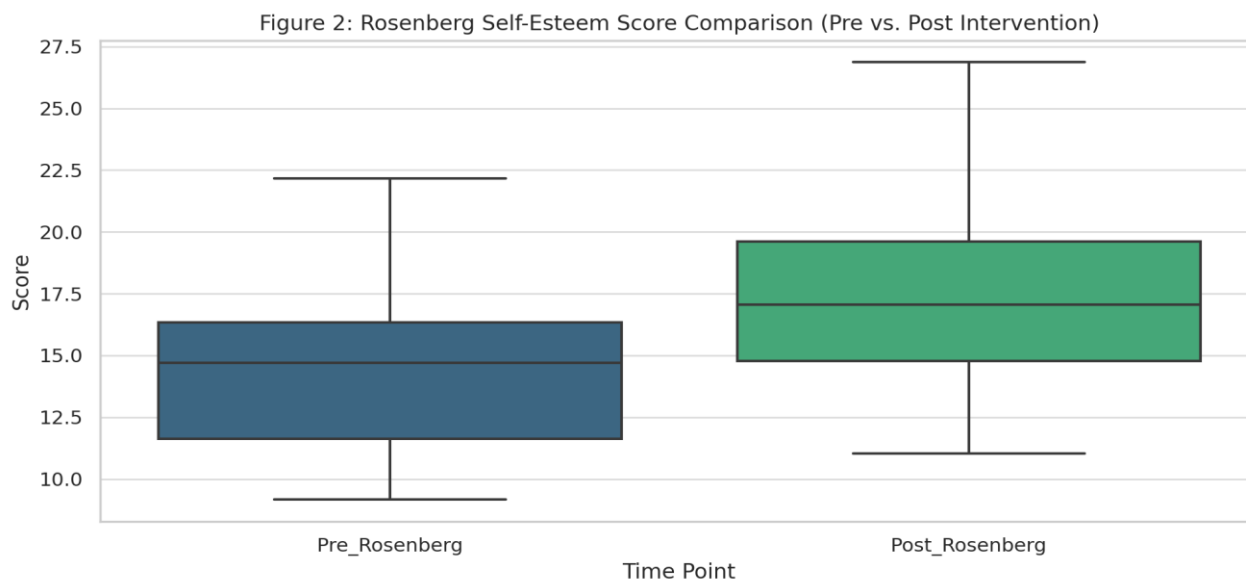
Below are two illustrative figures summarizing the change in scores;

Figure 1: PRPSA Score Comparison (Pre vs. Post)
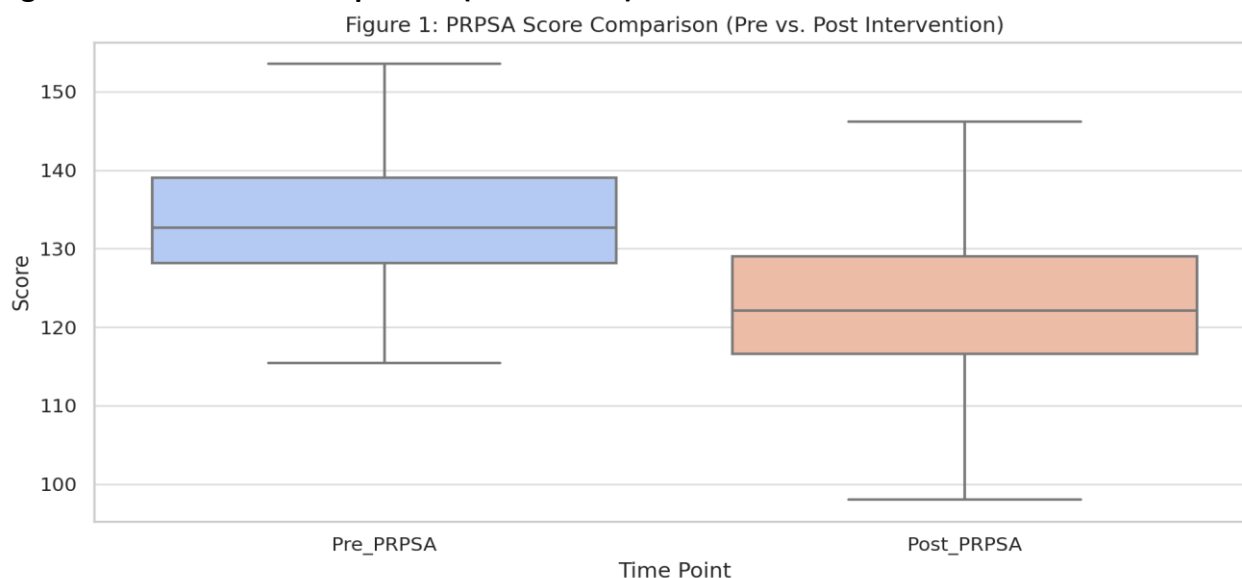
Shows a visible reduction in glossophobia levels post-training.

Figure 2: Rosenberg Self-Esteem Score Comparison (Pre vs. Post)

Figure 2: Rosenberg Self-Esteem Score Comparison (Pre vs. Post Intervention)

Demonstrates improvement in self-esteem after the intervention.

Discussion

The findings confirm that structured oral presentation skills training has a statistically significant and practically meaningful impact on reducing glossophobia and improving self-esteem among Allied Health students. This aligns with previous research indicating that active engagement and experiential learning hallmarks of the intervention design can bolster students' communicative confidence and self-perception (Grieve, 2021; Dansieh et al., 2021).

Notably, while both glossophobia and self-esteem improved, the absence of a strong correlation between their post-intervention scores indicates that multiple psychological factors likely mediate these improvements. For example, some students may become less fearful without a proportionate increase in self-worth, or vice versa. This underscores the need for differentiated support strategies targeting both anxiety and identity construction. This intervention demonstrates a promising model for integrating communication training within allied health curricula. Future research may explore the long-term effects and expand the sample to include comparisons across academic years and gender to assess broader generalizability.

Conclusion

This study set out to examine the impact of oral presentation skills training on glossophobia and self-esteem among second-year Allied Health Sciences students in Karachi. The findings conclusively demonstrated that structured training significantly reduced students' levels of public speaking anxiety, as measured by the Personal Report of Public Speaking Anxiety (PRPSA), and improved their self-esteem, based on Rosenberg's Self-Esteem Scale. The intervention not only addressed a prevalent and often overlooked barrier in student performance—glossophobia—but also empowered students psychologically, enabling them to participate more confidently in academic and professional environments. Given that communication is a foundational competency in the health professions, these improvements hold practical implications for both student development and patient care outcomes in the long term.

The results revealed that the intervention was particularly effective in helping students overcome the fear of public speaking, a phobia that has been widely recognized for its negative impact on

student engagement, academic performance, and career progression. Students who initially scored within high anxiety ranges demonstrated significant reductions post-training, affirming the value of repetitive, scaffolded oral practice, peer feedback, and expert guidance as effective pedagogical tools. Interestingly, while both glossophobia and self-esteem improved, the data showed no strong correlation between their post-intervention scores, suggesting that although the two constructs are psychologically intertwined, they may respond independently to educational interventions. This insight is crucial for educators who aim to design holistic training programs; it implies the need for dual-focus initiatives that separately but simultaneously address anxiety reduction and confidence building.

In conclusion, this research underscores the importance of incorporating oral presentation skills training into the core curriculum of Allied Health education. By equipping students with both the technical competencies and the emotional resilience needed to speak in public, institutions not only enhance academic performance but also prepare future healthcare professionals for real-world challenges involving patient interaction, interdisciplinary communication, and leadership. Furthermore, the findings advocate for the expansion of support services such as counseling and psychosocial workshops to sustain improvements beyond the training period. Given the limited prior research in this domain, particularly in South Asia and among Allied Health students, this study contributes valuable empirical evidence and opens new avenues for future inquiry. Replicating this model across diverse student populations and evaluating long-term outcomes could further strengthen the case for institutional reform aimed at combating glossophobia and promoting self-efficacy in healthcare education.

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