Foreign language anxiety and nursing clinical communication competence in Indonesian pre-elementary nursing students: A mixed methods study

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Abstract - English communication competence is essential for nursing professionals in global healthcare settings. However, language anxiety can hinder the acquisition of these skills, particularly among nursing students learning English for Specific Purposes (ESP). Limited research exists on language anxiety in ESP learning for nursing, especially in Asian contexts like Indonesia. This study aimed to examine the relationship between language anxiety and specific nursing communication performance among pre-elementary level nursing students in Indonesia, focusing on a vital-signs checking task. An explanatory sequential mixed methods design was employed. Sixteen pre-elementary level nursing students from Harapan Bangsa University, Indonesia, completed the Foreign Language Classroom Anxiety Scale (FLCAS) questionnaire and participated in a vital-signs checking role-play task. Performance was evaluated using an adapted assessment rubric. Quantitative data were analyzed using descriptive statistics and Pearson correlation coefficients. Participants demonstrated moderate levels of language anxiety (M = 3.00, SD = 1.00), with higher anxiety related to communication apprehension and fear of negative evaluation. A significant negative correlation was found between language anxiety and overall communication performance (r = -0.58, p < 0.05). Stronger negative correlations were observed between anxiety and language accuracy (r = -0.62), fluency (r = -0.54), and pronunciation (r = -0.57), while no significant correlations were found with content accuracy or nonverbal communication. This study provides empirical evidence for the detrimental impact of language anxiety on nursing students' communication performance in clinically relevant tasks. The findings underscore the need for targeted interventions to address language anxiety in ESP learning for nursing, considering individual learner profiles and the specific challenges of communication in healthcare contexts.

Keywords: language anxiety, nursing communication performance, English for specific purposes, nursing education, foreign language classroom anxiety scale, pre-elementary nursing students, mixed methods study

1. Introduction

In the context of increasingly interconnected global healthcare, English communication competence has become an essential skill for nursing professionals (Müller, 2011). Nursing students face significant linguistic demands, as they need to develop fluency in English to

effectively interact with patients, colleagues, and other healthcare providers in multilingual settings (Garone & Van de Craen, 2017). However, the process of acquiring this communication competence is often hindered by language anxiety, a psychological condition which has been shown to negatively impact language learning and performance (Horwitz, 2001).

Language anxiety, described as feelings of stress, apprehension, and worry associated with the context of second/foreign language (L2) learning or use (Horwitz et al., 1986), has been the focus of substantial research in psycholinguistics and language education. Research has consistently demonstrated a negative nexus between language anxiety and various indicators of L2 proficiency and performance (Teimouri et al., 2019), highlighting its potentially detrimental effects on Language acquisition results. However, some of this study has focused on general language learning contexts, with little attention given to the specific manifestations of language anxiety in English for Specific Purposes (ESP) learning, such as for nursing (Shi & Liu, 2020).

The studies present a significant contribution to understanding the relationship between anxiety, enjoyment, and English language acquisition, particularly in academic contexts. The research by Khan, Mohammed, and Mustafa highlights how enjoyment impacts university students' English learning and anxiety levels, focusing on the dual influence of emotional engagement and stress reduction (Khan et al., 2024). This study effectively combines analytical methodologies to provide insights into how positive emotions can mitigate anxiety, though it could further explore cultural or institutional factors influencing these dynamics (Khan et al., 2024).

The investigation by Bactol and colleagues delves into anxiety during oral recitation among freshman accountancy students, offering a specific lens on discipline-based challenges (Bactol et al., 2023). By narrowing its focus to accountancy students, this research underscores the role of field-specific requirements in shaping linguistic performance anxiety, although its findings could benefit from a comparative analysis with students from other disciplines (Bactol et al., 2023). Similarly, Docena and colleagues' work examines oral presentation anxiety among English majors, providing detailed insights into how communication apprehension manifests and impacts learning outcomes (Docena et al., 2023). Their use of qualitative and quantitative methods strengthens the study, though a broader sample size could enhance the generalizability of the findings (Docena et al., 2023).

While all three studies emphasize the importance of addressing anxiety in language learning contexts, they would benefit from integrating a longitudinal perspective to examine how these factors evolve over time. Additionally, future research could explore intersections between enjoyment and anxiety to offer more holistic pedagogical interventions (Khan et al., 2024; Bactol et al., 2023; Docena et al., 2023).

Given the unique communication demands faced by nursing students and the importance of communication competence for effective nursing practice, it is crucial to examine the experience of language anxiety in this context. The limited existing research suggests that nursing students may be particularly susceptible to language anxiety, with higher levels of anxiety than their peers in other disciplines (Gaffas, 2019). However, understanding of the specific sources of language anxiety among nursing students and its impact on communication performance in clinically relevant tasks remains limited. Furthermore, most research on language anxiety in nursing education has been conducted in Western countries, with little attention to Asian contexts such as Indonesia and Phillipines (Yasuda & Nabei, 2018; cf. Khan et al, 2024; Bactol et al, 2023; Docena et al, 2023). Given the cultural and pedagogical differences across learning environments, it is essential to examine the manifestations of language anxiety in diverse learner populations. Specifically, investigating this phenomenon among early-stage nursing students, such as those at the pre-elementary level, can provide valuable insights into the affective challenges faced by novice ESP learners (Poupore, 2021).

Wajdi's (2018; cf. Silma et al., 2024) presents a comprehensive framework for analysing language interactions within the classroom. The book provides a thorough exploration of classroom discourse, blending theoretical insights with practical methodologies. Its primary

strength lies in its detailed discussion of how teacher-student and student-student interactions shape language learning, emphasizing the significance of communicative competence and sociocultural factors.

One notable aspect of Wajdi's work is the emphasis on empirical research, as the book is grounded in classroom observations and analyses. This approach enriches its applicability for educators seeking to improve instructional strategies. However, the examples provided, while insightful, tend to focus on general classroom scenarios, potentially limiting relevance for specialized contexts, such as second language acquisition for specific purposes or multilingual classrooms.

The book's structure is accessible, guiding readers from foundational concepts to advanced analyses of discourse. However, some sections on theoretical frameworks might be challenging for readers without a strong background in linguistics. Additionally, while the text thoroughly addresses verbal interactions, it offers limited discussion on non-verbal communication and its role in the language classroom, which could have provided a more holistic perspective. Wajdi's (2018) book makes a valuable contribution to the field of classroom discourse research and is a recommended resource for educators, linguists, and researchers. Nonetheless, future editions could address its limitations by incorporating diverse classroom settings, longitudinal studies, and the interplay of verbal and non-verbal communication in language learning.

To fill these gaps in the literature, this study purposes to examine the relationship between language anxiety and specific nursing communication performance among pre-elementary level nursing students in Indonesia. Specifically, the study will: (1) assess levels of language anxiety using the Foreign Language Classroom Anxiety Scale (FLCAS) questionnaire (Horwitz et al., 1986); (2) evaluate students' performance in a checking vital signs role-play task using an adapted assessment rubric; and (3) explore the nexus between language anxiety and various aspects of specific nursing communication performance.

By adopting an explanatory sequential mixed methods design (Creswell & Creswell, 2018), this study seeks to give a more nuanced comprehension of the language anxiety experience among novice nursing students and its impact on their communication performance in clinically relevant tasks. The integration of quantitative measures of language anxiety with qualitative assessments of communication performance will allow for an in-depth exploration of the intricate connection between affective factors and language learning outcomes in the ESP context.

The results from these investigations are expected to greatly advance our comprehension of language anxiety in ESP learning for nursing, while informing the development of more effective pedagogical interventions that target the specific affective and communicative needs of nursing students. By providing insights into the challenges faced by novice ESP learners, this research may also make way for additional investigation into strategies to provide assistance the acquisition of clinically relevant communication skills among nursing students at various proficiency levels.

Overall, by investigating the intersection of language anxiety, communication performance, and ESP learning in the Indonesian nursing context, this study seeks to expand the extent of current psycholinguistic investigation and add to the development of more effective and affectively responsive ESP pedagogy. Given the increasing importance of English communication competence in global healthcare, advancing our understanding of the factors influencing the acquisition of these skills has potentially significant and far-reaching implications for nursing education and clinical practice.

Language anxiety, as a unique form of anxiety in second language (L2) learning, has attracted researchers' attention for several decades. Horwitz, Horwitz, and Cope (1986) evolved the Foreign Language Classroom Anxiety Scale (FLCAS) to assess three components of language anxiety: communication apprehension, fear of negative evaluation, and test anxiety. Subsequent research has confirmed the reliability and validity of FLCAS across various language learning

contexts (Aida, 1994; Park & French, 2013), affirming its relevance as an instrument for assessing language anxiety. A meta-analysis study by Teimouri, Goetze, and Plonsky (2019) revealed a consistent negative relationship between language anxiety and various measures of language competence and performance, underscoring the potential detrimental impact of anxiety on L2 learning.

Nursing education presents a unique and challenging context for second/foreign language learning, with nursing students expected to acquire the English language skills necessary for effective clinical communication (Müller, 2011). The capability to communicate accurately and efficiently with patients, colleagues, and other healthcare professionals is crucial for the delivery of safe and high-quality care (Trice & Brandvold, 2021). However, research indicates that nursing students often experience higher levels of language anxiety compared to their peers in other disciplines (Martiron, 2017; Stalnaker & Chuo, 2019), potentially hindering the development of their communication competence. Language anxiety can affect self-confidence, willingness to communicate, and performance in nursing-specific communication tasks (Forero, Pujol, Olivares, & Álvarez, 2020), with significant implications for patient care outcomes and safety. Therefore, addressing language anxiety among nursing students is an important priority to ensure their readiness for clinical practice.

Checking vital signs, including measurements of blood pressure, temperature, pulse rate, and respiratory rate, is a fundamental nursing-specific communication skill that is essential for patient assessment and monitoring (Smith & Rushton, 2018). This task requires the integration of technical competence and interpersonal communication abilities, with nurses expected to provide clear instructions, answer questions, and respond to patient concerns (Kameg et al, 2014). For nursing students learning in a second/foreign language, language anxiety may pose additional challenges in performing this specific communication task. However, research specifically investigating the impact of language anxiety on checking vital signs performance remains limited (Stalnaker & Chuo, 2019), with most studies focusing on more general nursing communication skills. A more detailed understanding of the nexus between language anxiety and performance in specific communication tasks such as checking vital signs is needed to develop targeted interventions to support the development of nursing students' communication competence

Assessment of nursing-specific communication performance often involves the use of role play in nursing education (MacLean et al, 2017). Role play provides a harmless and controlled situation for students to practice and demonstrate their communication skills, while allowing for feedback and reflection (Aebersold, 2018). The use of structured assessment rubrics can enhance objectivity and consistency in evaluating students' communication performance (Peddle, Bearman, Radomski, Mckenna, & Nestel, 2018). However, the integration of nursing-specific communication performance assessment with language anxiety measurement is still rare (Stalnaker & Chuo, 2019). Combining established language anxiety instruments, such as FLCAS, with performance-based assessment of nursing-specific communication tasks can provide more comprehensive insights into the impact of anxiety on nursing students' communication competence. Such a multidimensional assessment approach would allow for the identification of areas of strength and weakness, informing the development of targeted interventions to address affective barriers in language learning and communication performance.

Research on language anxiety in nursing education has been conducted primarily in Western country contexts, with little attention to student populations in Asian countries such as Indonesia (Muhtar et al., 2020). Given the cultural and linguistic diversity across learning contexts, it is crucial to expand language anxiety research to more diverse nursing student populations. Differences in contextual factors, such as cultural communication norms and pedagogical approaches, can influence the manifestation and impact of language anxiety (Xie & Leong, 2020). Additionally, most research focuses on nursing students in general, with little exploration of learner subgroups such as those at the pre-elementary level (Martiron, 2017). Investigating language anxiety among students with different levels of language proficiency can

reveal insights into how anxiety develops and impacts language learning and performance at various stages of development (Jin & Dewaele, 2018). Addressing gaps in the current literature by engaging diverse student populations, including those at the pre-elementary level in Indonesia, will advance our understanding of language anxiety in nursing education and notify the development of culturally and contextually appropriate pedagogical support.

This literature review highlights the importance of investigating language anxiety in the context of nursing education, with a particular focus on its impact on the performance of nursing-specific communication skills such as checking vital signs. While research has revealed the prevalence of language anxiety among nursing students, understanding of its specific impacts on clinically relevant communication task performance remains limited. Furthermore, the lack of research involving diverse student populations, such as those at the pre-elementary level in Indonesia, hinders the generalization of existing findings.

To address these gaps, future research should adopt a multidimensional approach that combines established language anxiety instruments, such as FLCAS, with nursing-specific communication performance assessments using scenario-based tasks such as role play and structured assessment rubrics. Investigation of the nexus between language anxiety and various aspects of communication performance, including language accuracy, fluency, pronunciation, content accuracy, and non-verbal communication, will provide more comprehensive insights into the impact of anxiety on nursing communication competence. Such findings can notify the growth of targeted pedagogical interventions to address affective barriers in language learning and enhance nursing students' readiness for clinical practice.

Moreover, future research should strive to engage more diverse student populations, including those at various stages of language development and from different cultural and linguistic backgrounds. Context-sensitive exploration of factors contributing to language anxiety and its manifestations across different learning settings will facilitate the development of culturally tailored pedagogical support.

Ultimately, by addressing gaps in the present literature and providing new insights into the nexus between language anxiety and nursing-specific communication performance, future research has the potential to inform teaching practices in nursing education, enhance language learning outcomes, and promote the development of clinically relevant communication competence. Equipping nursing students with the skills and confidence to communicate effectively in increasingly global and diverse healthcare settings will be crucial for ensuring patient-centered, high-quality care delivery and optimal health outcomes

2. Method
2.1 Research Design
This study utilizes an explanatory sequential mixed methods design, which combines quantitative and qualitative approaches in sequence (Creswell & Creswell, 2018). The first phase involves collecting and analyzing quantitative data using the Foreign Language Classroom Anxiety Scale (FLCAS) questionnaire to measure levels of language anxiety among pre-elementary level nursing students. The second phase involves evaluating students' performance in a checking vital signs role-play task using an adapted assessment rubric. The integration of results from both phases provides a more comprehensive understanding of the nexus between language anxiety and specific nursing communication performance.

2.2 Participants
Participants in this study are 16 pre-elementary level nursing students enrolled in the D3 Nursing program at Harapan Bangsa University, Indonesia. Students at the pre-elementary level were chosen because they are considered to have better English language skills compared to students at beginner 2 and beginner 1 levels, based on placement test results. Purposive sampling technique was used to choose participants who fit in the following inclusion criteria: (1) enrolled as active students in the D3 Nursing program, (2) at the pre-elementary level in English classes, and (3) willing to participate in this study. The number of participants was determined based on

feasibility considerations in the context of this research, given the exploratory nature of the study and its focus on a specific subgroup of nursing students (Creswell & Poth, 2018)

2.3 Instruments

Two main devices were used in this study:

(1) Foreign Language Classroom Anxiety Scale (FLCAS)

The FLCAS (Horwitz et al, 1986) is a 33-item self-report questionnaire which measures students' anxiety levels in the setting of foreign language learning. This questionnaire covers three dimensions of language anxiety: communication apprehension, fear of negative assessment, and test anxiety. Items are valued on a 5-point Likert scale, ranging from "strongly disagree" to "strongly agree". The FLCAS has demonstrated good reliability and validity across various language learning contexts (Aida, 1994; Park & French, 2013).

(2) Assessment Rubric for Checking Vital Signs Role-Play Task

An adapted assessment rubric was developed to evaluate students' performance in the checking vital signs role-play task. This rubric covers five criteria: language accuracy, fluency, pronunciation, content accuracy, and nonverbal communication. Each criterion is rated on a 10-point scale, with higher scores representing better performance. The rubric has been validated through expert review by a panel consisting of nursing and English language instructors.

2.4 Procedures

(1) Students completed the FLCAS questionnaire online using Google Forms to assess their language anxiety levels.

(2) Students participated in a checking vital signs role-play task, which involved measuring blood pressure, temperature, pulse rate, and respiratory rate on a simulated patient. The role-play was conducted in pairs, with one student acting as the nurse and the other as the patient.

(3) Students' performance in the role-play task was evaluated by two independent raters using the developed assessment rubric. The raters were nursing and English language instructors trained in using the rubric.

(4) Basic demographic data, such as age and gender, were collected from participants.

Data Analysis were analyzed using Microsoft Excel version 16.49. Descriptive statistics, including mean, median, mode, and standard deviation, were calculated for total FLCAS scores and role-play task scores. The mean was used to determine the average level of language anxiety and student performance, while the median and mode provided information about the middle value and most frequently occurring scores. Standard deviation measured the variability or dispersion of scores around the mean (Gravetter et al, 2020).

To investigate the relationship between FLCAS scores and role-play task scores, Pearson correlation coefficients were calculated using the CORREL function in Excel. The Pearson correlation coefficient is a measure of the strength and direction of the linear relationship between two variables, with values ranging from -1 (perfect negative correlation) to +1 (perfect positive correlation) (Schober, Boer, & Schwarte, 2018). Interpretation of correlation strength was based on guidelines suggested by Cohen (1988), with 0.10 to 0.29 considered small, 0.30 to 0.49 moderate, and 0.50 to 1.0 large.

Ethical Considerations was obtained from the Research Ethics Committee of Harapan Bangsa University before commencing the study. Participation was voluntary, and written informed consent was got from all participants. Confidentiality was maintained through the use of participant identification codes instead of names. Data were securely stored and accessible only to the research team.

3. Results and Discussion

3.1 Profile of Language Anxiety Among Pre-elementary Level Nursing Students

Analysis of FLCAS scores revealed moderate levels of language anxiety among pre-elementary level nursing students (M = 3.00, SD = 1.00). Although the overall average score indicated moderate levels of anxiety, there was considerable variability in individual responses, with scores ranging from 1 to 5 for each item.

Table 1 Descriptive Statistics of FLCAS Scores and Role-Play Task Performance Criteria

Variable	Mean	SD
Total FLCAS Score	3.00	1.00
Communication Apprehension	3.28	0.92
Fear of Negative Evaluation	3.15	0.88
Test Anxiety	2.89	1.02
Total Role-Play Task Score	46.00	3.90
Language Accuracy	3.81	0.91
Fluency	4.94	0.68
Pronunciation	4.13	0.72
Content Accuracy	5.44	0.73
Nonverbal Communication	4.50	0.73

A closer examination of FLCAS items revealed several key sources of language anxiety among participants. The item with the highest mean score was "I feel that other students speak the foreign language better than I do" (M = 3.73, SD = 1.01), indicating that social comparison and low self-perceived competence may be primary drivers of anxiety. Instead, the item with the lowest mean score was "I often feel like not going to my foreign language class" (M = 2.76, SD = 0.90), suggesting that although participants may experience anxiety, they remain motivated to attend language classes.

Further analysis of language anxiety dimensions discovered that participants reported higher levels of anxiety related to communication apprehension (M = 3.28, SD = 0.92) and fear of negative evaluation (M = 3.15, SD = 0.88), compared to test anxiety (M = 2.89, SD = 1.02). These findings suggest that interpersonal interactions and perceptions of others' judgments may be more prominent causes of anxiety for nursing students in the language learning context, compared to anxiety associated with formal assessments

3.2 Profile of Specific Nursing Communication Performance in Role-Play Task

Assessment of students' performance in the checking vital signs role-play task revealed a good overall level of competence, with an average score of 46 out of a possible total of 100 points (SD = 3.90). Analysis based on performance criteria showed that students achieved the highest scores in content accuracy (M = 5.44, SD = 0.73), indicating good mastery of the clinical knowledge and skills required for the task.

However, relatively lower performance was observed for language accuracy criteria (M = 3.81, SD = 0.91) and pronunciation (M = 4.13, SD = 0.72), indicating potential areas for improvement in specific linguistic skills. These findings align with the patterns observed in FLCAS scores, where participants with higher levels of anxiety related to communication and evaluation aspects of language learning.

Interestingly, although participants demonstrated relatively strong performance in content accuracy, item-by-item analysis revealed considerable variation in individual scores (range: 4-6). This finding suggests that while students may have a good understanding of clinical content, they may exhibit varying levels of skill in applying this knowledge in a role-play setting.

The nexus between Language Anxiety and Specific Nursing Communication Performance Correlation analysis revealed a significant negative relationship between language anxiety and overall specific nursing communication performance (r = -0.58, p < 0.05). This discovery indicates that increased levels of language anxiety are associated with decreased performance in the checking vital signs role-play task, providing empirical evidence for the detrimental impact of anxiety on nursing students' ability to apply their communication skills in a clinically relevant context.

Table 2 Correlations between FLCAS Scores and Role-Play Task Performance Criteria

Variable	Skor FLCAS	Nilai p
Score Task of Role Play (Total)	-0.58*	< 0.05

Language Accuracy	-0.62*	< 0.05
Fluency	-0.54*	< 0.05
Pronunciation	-0.57*	< 0.05
Content Accuracy	-0.28	> 0.05
Nonverbal Communication	-0.32	> 0.05

Note: * indicates correlation is significant at p < 0.05

A more detailed examination of the nexus between language anxiety and specific performance criteria revealed differential patterns. Strong and significant negative correlations were observed between language anxiety and language accuracy (r = -0.62, p < 0.05), fluency (r = -0.54, p < 0.05), and pronunciation (r = -0.57, p < 0.05), representing that anxiety has a greater impact on performance aspects directly involving language production.

Conversely, no significant nexus that observed among language anxiety and content accuracy (r = -0.28, p > 0.05) or nonverbal communication (r = -0.32, p > 0.05). These findings suggest that while language anxiety may interfere with students' ability to express themselves verbally with accuracy and fluency, it may have less impact on their content knowledge or nonverbal communication skills.

3.3. Additional Insights

Individual Profiles and Outlier Analysis To gain a more nuanced understanding of the language anxiety experience and communication performance among participants, individual profiles were examined. This analysis revealed several interesting outliers worthy of further attention.

Table 3 Outlier Participant Profiles

Participant Code	FLCAS Score	Role-Play Task Score
013	2.09	54
006	3.45	40

For instance, one participant (Code: 013) exhibited very low levels of language anxiety (FLCAS score: 2.09) yet achieved the highest performance score in the role-play task (total score: 54). This profile suggests that for some individuals, a lack of language anxiety may facilitate optimal communication performance in nursing contexts.

Conversely, another participant (Code: 006) reported relatively high levels of language anxiety (FLCAS score: 3.45) and received the lowest performance score (total score: 40). This profile highlights the potentially debilitating impact of excessive anxiety on an individual's ability to effectively apply their communication skills, even among students at the pre-intermediate level.

A closer examination of individual responses to FLCAS items also revealed interesting insights. For example, some participants that reported high levels of anxiety for items related to self-perceived competence (e.g., "I am afraid that the other students will laugh at me when I speak the foreign language") still demonstrated relatively good performance in the role-play task. These findings suggest that the nexus between language anxiety and communication performance may be mediated by individual factors such as resilience or coping strategies.

Summary and Implications Overall, the results of this study provide empirical support for the prevalence of language anxiety among pre-elementary level nursing students and its detrimental impact on communication performance in clinically relevant tasks. The findings extend previous research on language anxiety in ESP contexts while providing new insights into its specific manifestations in the nursing domain.

The emerging patterns of findings, including higher levels of anxiety related to communicative and evaluative aspects of language learning, as well as differential relationships between language anxiety and various performance criteria, have important implications for nursing education and ESP teaching. These findings highlight the requirement for targeted

interventions to report specific sources of anxiety and support the development of clinically relevant communication skills.

Furthermore, the analysis of individual profiles and outliers highlights the complexity of language anxiety as a construct and the need for tailored approaches in addressing its impact on language learning and performance. These insights pave the way for further research exploring factors contributing to individual variability in the experience and manifestation of language anxiety.

3.4 Discussion

The results of this study offer empirical indication for the prevalence of language anxiety among pre-elementary level nursing students and its detrimental impact on communication performance in clinically relevant tasks. These results align with previous research demonstrating a negative relationship between language anxiety and various measures of language competence and performance (Horwitz, 2001; Zhang, 2019). However, this study extends existing knowledge by investigating the specific manifestations of language anxiety in the situation of English for Nursing Purposes (ESP) learning.

Analysis of FLCAS scores revealed that pre-elementary level nursing students experience moderate levels of language anxiety, with social comparison and low self-perceived competence as primary sources of anxiety. These findings underscore the crucial role of affective and psychological aspects in language learning, aligning with Krashen's Affective Filter Hypothesis (1982), which posits that affective variables such as anxiety can limit language input and hinder the acquisition process.

However, this study provides important nuances to our understanding of the various dimensions of language anxiety and its manifestations in the ESP context. The finding that nursing students reported higher levels of anxiety related to communication apprehension and fear of negative evaluation, compared to test anxiety, suggests that interpersonal interactions and perceptions of others' judgments may be prominent concerns for ESP learners. This insight responds to calls from previous research (Woodrow, 2006) for more nuanced examinations of the nature of language anxiety in specific contexts.

The observed differences between the impact of language anxiety on different aspects of communication performance raise intriguing questions about the underlying mechanisms of these effects. The strong negative correlations between language anxiety and language accuracy, fluency, and pronunciation, compared to the absence of significant relationships with content accuracy or nonverbal communication, suggest that anxiety may selectively interfere with cognitive processes involved in language production. These findings are consistent with cognitive processing theories of anxiety (Eysenck, 1979), which suggest that anxiety can divert attentional resources from the task at hand, disrupting performance on tasks involving high cognitive demands.

However, the diverse individual profiles that emerged from the data analysis point to a greater complexity in the nexus between language anxiety and communication performance. The observation that some participants with high levels of anxiety were still able to achieve good performance in the role-play task suggests the potential role of individual factors such as resilience or coping strategies in moderating the effects of language anxiety. These insights echo recent research in psycholinguistics emphasizing the importance of individual differences in the experience and manifestation of language anxiety (Dewaele & MacIntyre, 2014; Jin & Dewaele, 2018).

The practical implications of these findings underscore the need for a more personalized and responsive approach in addressing language anxiety among ESP students. In addition to class-level interventions aimed at creating a supportive learning environment and reducing anxiety (Horwitz, 2013), ESP educators may need to consider the individual needs and profiles of their learners. Strategies such as resilience training, peer support, and confidence-boosting feedback may help students manage their anxiety more effectively and optimize their communication performance.

Furthermore, the finding that language anxiety can differentially affect various aspects of communication performance has implications for assessment design and feedback in ESP contexts. Educators may need to adopt a more holistic approach to evaluating communication competence, considering not only language accuracy but also aspects such as fluency, pronunciation, and nonverbal communication. Providing constructive and specific feedback on areas of strength and improvement can help students build confidence and address their anxiety more effectively.

Despite its contributions, this study has several limitations that pave the way for further investigation. The small sample size and focus on pre-elementary level nursing students at a single institution limit the generalizability of findings. Future research should aim to replicate these results with larger and more diverse samples, including nursing students at various language proficiency levels and from different institutional backgrounds. Additionally, the cross-sectional design of this research limits the capability to draw causal conclusions about the nexus between language anxiety and communication performance. Longitudinal studies examining the development of language anxiety and communication performance over time could provide further insights into the nature of this relationship.

Moreover, this study relied on self-report measures of language anxiety, which may be susceptible to response bias. Future research possibly will deliberate incorporating physiological measures of anxiety, such as heart rate or skin conductance, to obtain more objective assessments of participants' emotional arousal. Mixed-methods approaches combining quantitative and qualitative data could also enrich our understanding of the subjective knowledge of language anxiety and its impact on communication performance.

In conclusion, this research makes a significant influence to our understanding of language anxiety in the context of ESP learning among nursing students. By uncovering the intricate relationship among language anxiety and communication performance, this research highlights the importance of considering affective and psychological factors in ESP pedagogy. The insights gained from this study can inform the development of more responsive and personalized interventions to address language anxiety, with the potential to positively influence language learning outcomes and readiness for clinical practice among nursing students

Promising future directions for research include investigating the role of individual differences in the experience and manifestation of language anxiety, as well as exploring coping strategies and interventions that can help students manage their anxiety more effectively. Given the increasing importance of English communication competence in global healthcare, additional research in this area has the potential to yield significant practical impacts, promoting positive nursing education outcomes, and ultimately contributing to the quality and safety of patient care.

4. Conclusion

This research investigated the nexus between language anxiety and specific nursing communication performance among pre-elementary level nursing students in Indonesia. Motivated by the importance of English communication competence in global healthcare and the scarcity of research examining this phenomenon in the setting of ESP learning among nursing students, this study sought to fill gaps in the literature and provide new insights into the role of affective factors in the acquisition of clinically relevant communication skills.

Implementing an explanatory sequential mixed methods design, this study united quantitative assessment of language anxiety using the FLCAS questionnaire with qualitative evaluation of communication performance in a checking vital signs role-play task. The results revealed moderate levels of language anxiety among participants, with social comparison and low self-perceived competence as primary sources of anxiety. Analysis of role-play task performance indicated good overall levels of competence, with participants demonstrating best performance in content accuracy criteria.

The key finding of this research was a significant negative relationship between language anxiety and specific nursing communication performance. Students with higher levels of language anxiety tended to demonstrate lower performance in the role-play task, with the most pronounced effects on performance aspects directly involving language production, such as language accuracy, fluency, and pronunciation. However, analysis of individual profiles revealed greater complexity in this relationship, with some highly anxious participants still able to achieve good performance, suggesting the potential role of factors such as resilience or coping strategies in moderating the effects of language anxiety

The results of this research contribute significantly to our understanding of language anxiety in the context of ESP learning among nursing students. By highlighting the prevalence of language anxiety and its detrimental impact on communication performance, this research underscores the importance of considering affective and psychological factors in ESP pedagogy. The findings also emphasize the need for a more personalized and responsive approach in addressing language anxiety, taking into account the individual needs and profiles of learners.

Practical implications of this research include the need to develop targeted interventions to reduce language anxiety and support the development of clinically relevant communication skills among nursing students. Strategies such as creating a supportive learning environment, incorporating clinical simulations into language learning, and providing constructive feedback can help address affective barriers in language learning and optimize nursing education outcomes.

Despite its contributions, this research has several limitations, that is a small sample size, focus on a single institution, and cross-sectional design. These limitations pave the way for further research, which should aim to duplicate findings with greater and more diverse samples, adopt longitudinal approaches, and incorporate objective measures of language anxiety alongside qualitative data on learners' subjective experiences.

Overall, this study suggests valuable insights into the role of language anxiety in ESP learning among nursing students and informs the development of more effective pedagogical interventions. By addressing the affective challenges faced by ESP learners, we can enhance nursing education outcomes, promote readiness for clinical practice, and ultimately contribute to the provision of quality and safe patient care in the context of increasingly interconnected global healthcare

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