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PROFESSIONAL ENGLISH ANXIETY AND COMPREHENSION OF AI-GENERATED CLINICAL TEXTS IN MEDICAL EDUCATION [ABSTRACT]

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ABSTRACT

Aim/Purpose	Professional English anxiety poses a significant challenge in medical education, particularly as artificial intelligence (AI)-driven clinical decision support systems increasingly rely on English-language outputs. This study aims to develop and validate a Professional English Classroom Anxiety Scale, examine the relationship between professional English anxiety and comprehension of AI-generated clinical texts, and identify key sources of anxiety to inform pedagogical strategies.
Background	Although language anxiety has been widely examined in general and academic English learning, little attention has been given to professional English anxiety in medical education or its impact on understanding AI-generated clinical information. As AI-assisted clinical decision making becomes more prevalent, anxiety-induced comprehension difficulties may adversely affect learning outcomes and clinical safety.
Methodology	A mixed-methods research design was adopted. Quantitatively, a professional English anxiety scale was constructed and validated through exploratory factor analysis using data collected from medical students enrolled in professional English courses. The instrument demonstrated strong internal consistency. Multiple regression analyses were conducted to examine the predictive relationships between anxiety dimensions and comprehension perfor-

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mance on AI-generated clinical texts. Qualitatively, in-depth interviews were carried out to explore perceived sources of professional English anxiety, and the data were analyzed using structural coding and methodological triangulation.

Findings	Analysis revealed three underlying factors, namely Fear of Failure, Communication Apprehension, and Fear of Negative Assessment. Among these factors, Fear of Failure emerged as the strongest predictor of reduced comprehension of AI-generated clinical texts, whereas the other factors showed no substantial predictive effects. Qualitative findings indicated that anxiety was primarily driven by unfamiliarity with professional terminology and content, an insufficient English foundation, low self-confidence, difficulties in transitioning from general to professional English, and pressure associated with accuracy-oriented expectations.
Recommendations for Researchers	Accuracy-driven anxiety, particularly fear of failure, substantially impairs comprehension of AI-generated clinical texts. Error-tolerant classroom environments, formative feedback, lexical scaffolding, and cognitive load management are recommended to enhance readiness for AI-enhanced medical education.
Keywords	professional English anxiety, artificial intelligence (AI), fear of failure, communication apprehension, fear of negative assessment; medical education

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