Resilience Training for Medical Students in Spatial Computing Environments: Towards a Scoping Review

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Background: The COVID-19 pandemic highlighted the issue of stress and burnout among medical doctors, potentially worsening the shortage of quality care. Resilience training, teaching mental health maintenance despite stressors, could mitigate stress-related disorders. Combining generative artificial intelligence with affordable spatial computing hardware offers dynamic, scalable training to bolster resilience. This study evaluates resilience training in spatial computing environments for integration into medical education.

Method: A scoping review is being conducted to assess the state-of-the-art research on resilience training and spatial computing environments. Databases including PubMed, MEDLINE, EMBASE, and Scopus are included. Screening and data extraction involve two coders, with thematic analysis used for summarization.

Preliminary results: A preliminary search in PubMed resulted in 1'500 articles, of which the first 500 have been screened. Subsequently, the remaining databases and results will be screened. Overall, 14 relevant studies were included in a preliminary thematic analysis. Results indicate that spatial computing environments might have beneficial potential for medical education. However, none of the identified studies focused explicitly on resilience training.

Conclusion: AI-generated high-immersive spatial computing environments might have the potential to strengthen the resilience of medical students and doctors alike. The current findings indicate a lack of research and will inform a final version of a scoping review protocol. We suggest that exploring this area further by systematically developing and evaluating corresponding resilience training environments will support the future delivery of high-quality care by highly resilient medical practitioners.