

THE ART OF MEDICINE

Emily F. Chao¹ (MD Candidate, Class of 2026), Chetan Giduturi¹ (MD Candidate, Class of 2026), Joy Armstrong, PhD²

¹University of Colorado Anschutz Medical Campus, ²University of Colorado in Colorado Springs Galleries of Contemporary Art

Objectives: To explore how art impacts healthcare through: 1) Examining the impacts of various art mediums on healthcare provider burnout; and 2) Exploring the impact of art-based interventions in medical education and their effects on clinical practice.

Methods: Systematic literature review on the intersection of art and medicine.

Data sources: National Library of Medicine Pubmed and Google Scholar were searched beginning in March 2024 to December 2025.

Eligibility criteria for selection studies: Included studies that primarily examined the use of various art disciplines (including visual arts, literary arts, and theatre arts) in prevention of healthcare worker burnout, as well as the use of arts-based interventions to improve medical education and patient care. Selected studies had measurable tools to quantify wellbeing.

Data extraction and synthesis: Full text articles in English were independently reviewed by two medical students under the supervision of the director and curator of art at the University of Colorado in Colorado Spring (UCCS) Galleries of Contemporary Art (GOCA). Results were synthesized in narrative, qualitative, and quantitative forms through a comprehensive review article.

Results: A total of 36 articles were screened and have met inclusion criteria. Studies reported mixed effectiveness in improving healthcare worker burnout, empathy and observational skills. Arts-based interventions were found in some studies to reduce stress and burnout by enhancing tolerance for ambiguity and fostering connection through shared artistic expression, although direct effect on burnout remains limited. In medical education, arts-based programs improved empathy, observation, communication, and reflective skills.

Conclusions: Visual arts exercises overall improve the stress and burnout levels of healthcare workers. Specifically, the practice of art interpretation improves tolerance for ambiguity and uncertainty in clinicians, which is protective against burnout due to increased ability to navigate uncertain, complex situations with less anxiety. Creative arts also offer an expressive outlet for healthcare workers to share stress that is often associated with their lived experiences in their careers. As a result, arts-based interventions are associated with qualitative improvements in medical students' empathy generation and feelings of connection with both peers and patients. However, due to qualitative nature of the effectiveness of arts-based interventions, it can be difficult to compare the effects across different studies. Further investigation will be performed to conduct Visual Thinking Strategies (VTS) in person with a cohort of medical students and providers through the UCCS GOCA to measure effectiveness of VTS in improving burnout symptoms, observational skills, and perceived empathy.