



INNOVATIONS IN MEDICAL EDUCATION

Extending Arts-Based Interventions in Graduate Medical Education through the Positive Humanities: the Re-FRAME Workshop

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BACKGROUND: Arts-and-humanities-based interventions are commonly implemented in medical education to promote well-being and mitigate the risk of burn-out. However, mechanisms for achieving these effects remain uncertain within graduate medical education. The emerging field of the positive humanities offers a lens to examine whether and how arts-based interventions support well-being in internal medicine interns.

AIM: Through program evaluation of this visual art workshop, we used a positive humanities framework to elucidate potential mechanisms by which arts-based curricula support well-being in internal medicine interns.

SETTING: We launched the re-FRAME workshop at the Philadelphia Museum of Art in winter 2020.

PARTICIPANTS: Fifty-six PGY-1 trainees from one internal medicine residency program.

PROGRAM DESCRIPTION: The 3-h re-FRAME workshop consisted of an introductory session on emotional processing followed by two previously described arts-based interventions.

PROGRAM EVALUATION: Participants completed an immediate post-workshop survey (91% response rate) assessing attitudes towards the session. Analysis of open-ended survey data demonstrated 4 categories for supporting well-being among participants: becoming emotionally aware/expressive through art, pausing for reflection, practicing nonjudgmental observation, and normalizing experiences through socialization.

DISCUSSION: Our project substantiated proposed mechanisms from the positive humanities for supporting well-being—including reflectiveness, skill acquisition, socialization, and expressiveness—among medical interns.

KEY WORDS: graduate medical education; arts and humanities; visual art; well-being

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INTRODUCTION

Internal medicine (IM) interns struggle to thrive in today's complex and taxing clinical learning environment. Recent studies report low levels of job satisfaction and high levels of emotional exhaustion and depersonalization in this population.¹ The emerging field of the positive humanities, focused on how engagement with the humanities supports well-being, offers tools to address the problem of struggling early career physicians.² Specifically, arts-based interventions examined through the lens of the positive humanities have been associated with well-being outcomes including increased relaxation and stress relief, enhanced social connection, and improved emotional well-being in healthy adults.^{2–7} Similar benefits of engagement with visual art have been reported in medical students.⁸ What is missing in the literature is an exploration of the mechanisms by which these effects are achieved and further study within graduate medical education (GME), where support for well-being is sorely needed.^{1,9,10} Future efforts to harness arts-based curricula to promote trainee well-being are thwarted by not understanding these mechanisms.

Recent reviews of arts-based curricula in medical education consistently call for a shared conceptual framework for designing these programs, closer collaboration with museum educators and artists, greater attention to conducting program evaluation, and additional interventions in GME.^{9,11–14} In response to these calls, we modified a pre-existing pilot workshop for IM interns and launched the second iteration of the Fostering Resilience through Art in Medical Education (hereafter referred to as re-FRAME) workshop in 2020.¹⁵ We subsequently utilized Tay and Shim's conceptual framework for the positive humanities to better understand the mechanisms by which an arts-based curriculum can support well-being.^{16–18} Although it is similar to models of “flourishing,” we chose this distinct framework for its relevance in identifying salient mechanisms (“reflection,” “acquisition,” “immersion,” “socialization,” and “expression”) through which engagement with art, in particular, leads to comprehensive well-being.^{18–21}

SETTING AND PARTICIPANTS

Two clinical educators (AO, FH, OT, or KG) and two museum educators (AR, SN, or SS) facilitated each re-FRAME workshop at the Philadelphia Museum of Art (PMA). The workshop was required for all interns and integrated into a longitudinal PGY-1 well-being curriculum. Interns received protected time from clinical duties on the morning of their workshop. The 3-h workshop ran throughout January and February 2020 as four separate sessions, each hosting 13–16 interns from an urban academic institution. A total of 56 out of 64 interns (87.5%) attended a session; eight interns with scheduling conflicts were excused.

PROGRAM DESCRIPTION

Collaborative Workshop Design

PMA educators (SN, AR) and authors with experience in medically oriented visual art workshops (HD, AO) designed the FRAME pilot workshop in 2017 using established visual art pedagogy.^{15,22} Study authors (HD, FH, AO) then consulted with a medical visual art workshop coach prior to making formative revision to the re-FRAME workshop in 2020 to conclude with the Personal Responses Tour, a well-described museum activity (see Table 1).²³ Workshop educational objectives are also listed in the accompanying Table 1.

The University of Pennsylvania Institutional Review Board approved this study. AO obtained informed consent from participants. All interns received a 1-year pass to the PMA to encourage return visits.

Resources Required

Costs included museum passes for interns and faculty facilitators, payment for museum educators, and rideshare for several interns scheduled for afternoon clinics. The approximate cost per intern was \$65. Each workshop also required dedicated time from two clinical faculty members.

Workshop Structure

Introduction One of the study authors (OT, FH, KG) led a 45-min facilitated discussion on emotional processing techniques to prime participants for using art as an outlet for emotional expression.

Artful Thinking Routine—“Elaboration Game” Following the introduction, the large group engaged in a 45-minute Artful Thinking routine, “Elaboration Game.”²² (See Table).

Personal Responses Tour The large group split into two smaller groups to conclude the session with an hour-long adaptation of the Personal Responses Tour.²³ One museum educator (AR, SN, SS) and 1–2 faculty facilitators (AO, FH, OT, or KG) led each small group.

Data Collection and Analysis

At the end of the workshop, participants completed a survey (see [Supplemental Material](#)) designed to assess their attitudes towards the workshop. Study authors (AO, HD, FH, OT) designed the quantitative portion of the survey based on workshop objectives and data obtained from the pilot workshop. The open-ended survey questions included an optional space for feedback as well as two questions from a survey used in a separate arts-based intervention: “What is the most important thing you learned or will take away from this workshop?” (question 1) and “Through this session, was there anything, if at all, that you learned about yourself?” (question 2).⁸

Open-Ended Survey Responses AO, who in addition to experience in arts-based teaching also has graduate-level training in qualitative research methods, reviewed survey responses to Questions 1 and 2. Consistent with directed content analysis, he created a priori codes for potential mechanisms for well-being derived from Tay and Shim’s conceptual model, including “reflectiveness,” “acquisition of new skills,” “immersion,” “socialization,” and “expressiveness.”^{16–18} After using a deductive approach to test the general “goodness of fit” of these general mechanisms for

Table 1 Re-FRAME workshop exercises and objectives

Museum-based activity	Educational objectives
Artful Thinking Routine ²² - Elaboration Game: Learners observe portions of a work of art quietly for a minute, then engage in facilitated discussion focused on describing what they see without interpretation or judgment. After describing all sections of a painting separately, the group then constructs meaning of the work as a whole	Articulate responses to visual art Practice skills of careful observation
Personal Responses Tour ²³ : Learners break into small groups (6–8 interns) and individually select a work of art that resonates with them in response to a randomly assigned prompt (e.g. “Find an artwork that represents a crossroads you currently face” or “Find an artwork that speaks to how your medical training has transformed you”). After time for reflection, learners share their personal responses to the works of art and their prompts with the group	Reflect upon how personal experience influences clinical practice Have an opportunity to strengthen connections with peers

the dataset, AO then constructed four specific categories to describe how relevant codes applied within this cohort in particular. As a check on the dependability of the qualitative analysis, AO shared coded data with members of the study team with qualitative research expertise and affinity for the medical humanities (DB, FH).²⁴ Disagreements in coding or clustering of coded responses into categories were resolved by consensus after discussion. The datasets analyzed during the current study are available from the corresponding author on reasonable request.

PROGRAM EVALUATION

Participant Demographics

Of the 64 possible workshop participants, 51 (79.7%) were categorical IM interns. Ten (15.6%) were completing an IM preliminary year, and 3 (4.7%) were completing a combined medicine-pediatrics or medicine-dermatology residency. There was an even split between female ($n = 33$, 51.6%) and male ($n = 31$; 48.4%) participants.

Quantitative Results

Results from the quantitative portion of the post-workshop survey ($n = 56$; 100% response rate) are shown in the accompanying Fig. 1.

Specifically, survey results demonstrate that the workshop achieved its goals and objectives, allowed a safe space for expression of vulnerability, and provided an opportunity for personal reflection.

Workshop Quality Eighty-four percent of participants ($n = 47$) rated workshop quality as either “very good” or “excellent.” 12.5% ($n = 7$) rated workshop quality as good, 3.5% ($n = 2$) rated workshop quality as fair, and no participant rated workshop quality as poor.

Open-Ended Questions

Qualitative data were derived from survey responses to the two questions previously mentioned ($n = 56/56$ for question 1 [100%]; $n = 46/56$ for question 2 [82%]; overall combined response rate to these questions 91%).⁸ Responses were coded using a priori codes and then grouped according to the following constructed categories, presented below in order of their prominence in the data.

Becoming Emotionally Aware and Expressive Through Art. Roughly one third of coded survey responses recognized the power of expressing emotion. Often, interns discussed avoiding emotional processing. Sometimes this was inadvertent: “I have been hiding a lot of my emotions, not only from others but from myself- which I was trying not to do” (ID 3). Other times it was intentional: “I am sometimes afraid to unpack or deal with emotions and I avoid some strategies, such as writing, to avoid unpacking things, but that is something I could work to engage in” (ID 36). After allowing these emotions to surface in the workshop, interns appreciated the ability of art to serve as an outlet for emotional expression: “I used to scoff at the idea that artistic expression could help me process my work but this session

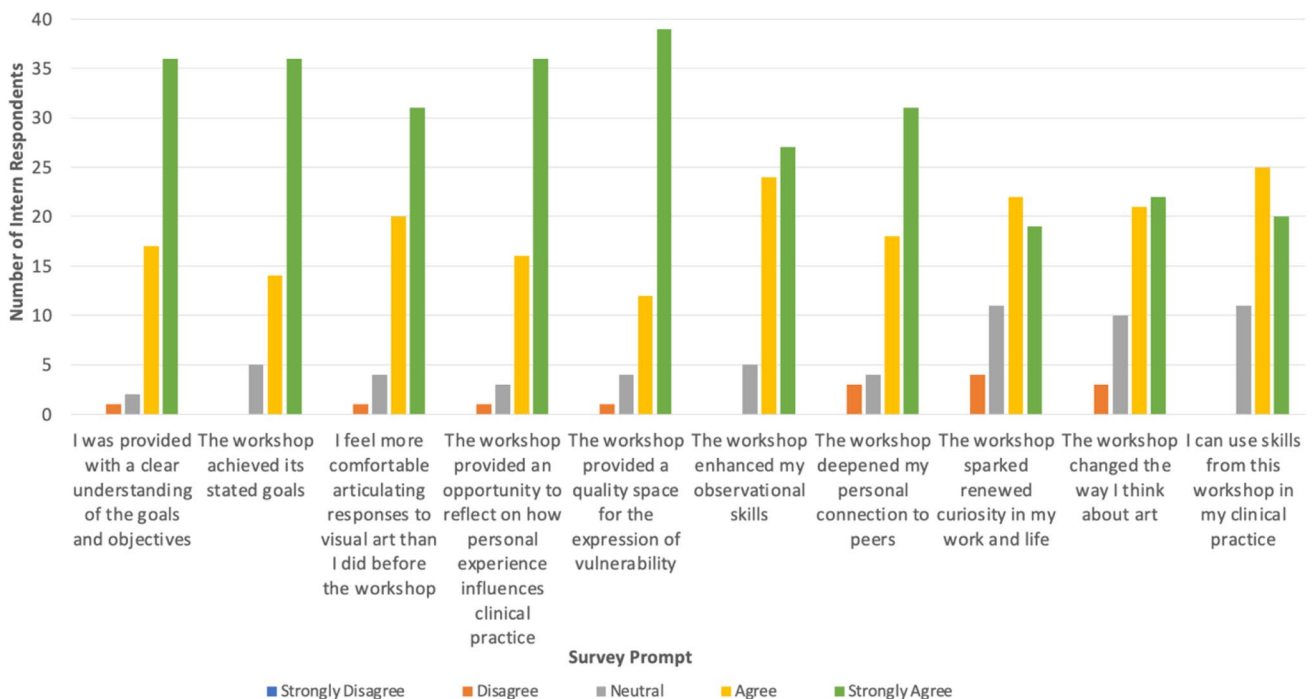


Fig. 1 Summary of post-workshop survey quantitative results.

helped me see how universal some of the emotions we feel every day are and how easy it is to see them in art” (ID 6).

Pausing for Reflection. Slightly more than one quarter of coded survey responses remarked on the value of reflecting and “slow[ing] down” through the workshop. Interns found the opportunity to pause to be pleasurable, “rejuvenating,” and a welcome change of pace from a hectic year: “[The session] was a reminder that I can connect with the reflective part of me, which I’ve otherwise shut down intern year” (ID 1).

Practicing Nonjudgmental Observation. Another one fifth of coded survey responses referred to the clinical relevance of separating pure observation from the interpretation of visual information: “The separation of observation from interpretation was a helpful exercise— just as we separate objective [data] from assessment in clinical practice, I was able to apply to art interpretation” (ID 1). They recognized the importance of “keeping assumptions in check” (ID 26) and “not jumping to conclusions” (ID 12, 19, 20) and noted how “this [skill] can be applied outside of art in many ways” (ID 39).

Normalizing Experience Through Socialization. Just over 10% of coded survey responses expressed positive regard for the chance to share challenges with peers. For example, one intern noted that “colleagues are going through the same struggles/conflicts/emotions as I am” (ID 29). Many interns felt validated in discovering they were not alone in their experience of intern year: “Hearing peers talk about similar experiences of intern year is always rewarding. Art gave us a good avenue to discuss feelings/thoughts related to work and medicine” (ID 27). Finally, interns expressed delight in sharing their own experiences through art: “The beneficial catharsis of discussing artwork with my peers was new to me” (ID 13).

DISCUSSION

The results of this museum-based visual art workshop for 56 PGY-1 IM trainees substantiate previously identified mechanisms for achieving well-being through arts-based interventions.¹⁸ With the exception of the “immersion” mechanism, which was not well-represented in the dataset, Tay and Shim’s conceptual model of the positive humanities aligned well with the survey responses.¹⁸ Our findings support “reflection,” “acquisition of skills,” “socialization,” and “expression” as avenues for well-being through arts-based curricula.^{16–18} The four constructed categories further specify how these general mechanisms were relevant to this cohort. Specifically, the workshop allowed the “expression” of neglected emotions, created dedicated

time for “reflection,” promoted “acquisition” of the skill of nonjudgmental observation, and validated shared experiences through “socialization.”

Within the broader context of arts and humanities interventions in medical education, participant responses describing emotional suppression and isolation during internship highlight the need for more work in GME.^{1,9–12} Although the Prism model for integrating art into medical education was not yet available when this workshop was created, our findings demonstrate that designing arts-based curricula to increase participants’ “personal insight” may effectively support well-being.¹² Additionally, our findings confirm that PGY-1 trainees, when asked the same questions posed to medical students after a previously described visual art intervention, also readily engaged with visual art and identified its benefits.⁸ Although a prior review identified only 12 published reports of visual art instruction for residents, we hope that providing the re-FRAME workshop structure and demonstrating its feasibility during residency promotes expansion of similar curricula within GME.¹⁰ Finally, while only half of previously published arts-based programs were evaluated, our program evaluation results supporting a conceptual framework from the positive humanities can inform future research in this space.⁹

Based on our results, the re-FRAME workshop has become a recurring component of the intern year curriculum. In response to feedback, another gallery-based activity has replaced the introductory, classroom-based discussion. Future evaluation will include artist and museum educator perspectives as outcome data, as well as well-being outcomes themselves (now that mechanisms for supporting well-being have been investigated). Interdisciplinary work exploring connections between the positive humanities and established models of “flourishing” can also be explored.^{19–21}

Our program evaluation is limited in that it represents findings from a single institution, includes self-reported perception outcomes potentially subject to social desirability bias, lacks long-term follow up data, and did not include Tay and Shim’s conceptual model in workshop design. We also acknowledge cost and time as possible barriers to implementation at other institutions. However, the session can be recreated in an immersive digital environment or as a “night at the museum” activity as has been done in the past.²⁵ Despite these limitations, we demonstrate that even brief engagement with visual art offered a high impact opportunity for interns to derive well-being benefits through mechanisms suggested by a conceptual model from the positive humanities.

Supplementary Information The online version contains supplementary material available at <https://doi.org/10.1007/s11606-023-08292-3>.

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Declarations

Conflict of Interest Study authors have no conflicts of interest to disclose.

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