



Patients, Peers, and Personal Identity: A Longitudinal Qualitative Study Exploring the Transformative Potential of the Arts and Humanities in Intern Training

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Abstract

Purpose

Medical education initiatives incorporate arts and humanities (AHs) to foster physician competence and professionalism. However, the full potential of these initiatives is unclear. A recent conceptual framework attempts to clarify this potential but was constructed primarily from undergraduate medical education studies. To explore AH instruction in graduate medical education (GME), the authors asked: What is the potential of a longitudinal curriculum incorporating AHs for the personal and professional development of internal medicine interns throughout the intern year?

Method

From September 2021 to June 2022, 14 internal medicine interns at a large internal medical residency program

participated in a longitudinal qualitative study, recording longitudinal audio-diaries (LADs) and participating in semistructured interviews. The LAD response rate was 91%, and the interview completion rate was 96%. The authors identified 3 themes that reflected shared meaning on the transformative potential of AHs: reclaiming personal sense of self, building community, and surfacing empathy. They constructed stories from 2 interns whose trajectories resonated most with AH instruction's potential for personal and professional development.

Results

Interns valued the abstract over the concrete benefits of AHs. Interns detailed valuable abstract benefits, with reclaiming sense of self, building community, and

surfacing empathy apparent across time, pointing to long-term effects of AH interventions. The intern stories revealed a steady appreciation for AHs and difficulty with the practical utility of AHs midyear before a return to recognition of its value by year's end.

Conclusions

Despite varying AHs experience levels, interns consistently appreciated AH instruction. These findings extend a prior conceptual model to a GME population by highlighting AH instruction's potential for reclaiming interns' senses of self, building community, and surfacing empathy. Future curricula can leverage this ability to create meaningful connections with one's purpose, peers, and patients to maximize the potential of AH instruction for GME learners.

Creative and diverse arts and humanities (AHs)-based interventions are increasingly integrated into contemporary medical education initiatives to foster the development of physician competence and professionalism.¹⁻⁵ However, these interventions are often integrated without a compelling answer to a fundamental

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question, "What are the arts and humanities trying to do in medical education?"^{4,6} Within graduate medical education (GME), in particular, studies frequently focus on determining the effectiveness of AH interventions rather than first understanding the full potential of AH instruction for personal and professional development.^{4,7-9} A recent study of an 8-week AH intervention in GME in the Netherlands attempts to shift attention to the latter, but illuminating the full potential of AHs curricula requires additional efforts to move beyond pre- and posttesting or participant satisfaction data.¹⁰ Specifically, prolonged engagement with AH interventions over time, coupled with longitudinal research methods that have the qualitative depth required to explore the full potential of AH instruction, is necessary. Without understanding the potential personal and professional changes that AH interventions are working to effect, it is challenging to optimally design curricula, identify

learning outcomes, and evaluate the effect of these endeavors in GME.

The potential changes attributable to AH instruction for learners in GME are legion. To grasp the range of possibilities, Kumagai¹¹ articulates 2 distinct lenses for understanding the goals of AHs in medical education. He describes a lens of "technical rationality" through which reason is practically applied using AH interventions with the goal of refining clinical skills (e.g., close observation, communication, or clinical reasoning).¹¹⁻¹³ He also describes an alternative lens of "human understanding" that appreciates AH interventions as opportunities to understand higher truth of "oneself, one's life, others, and the world."¹¹ A recently refined conceptual model of AHs in medical education (i.e., the Prism Model) combines both lenses to broadly categorize the overall goals of AH interventions into 4 domains: skill mastery, perspective taking, personal

insight, and social advocacy.^{14,15} This model was derived following qualitative analyses of educational records identified in a 2019 scoping review that revealed a disproportionately high number of undergraduate medical education (UME) initiatives in the AH literature.¹⁴ In UME, AH interventions have indeed been shown to contribute to consequences within these domains, including increasing observational skills, enhancing interpersonal connections, fostering professional identity formation, and building reflective capacity.^{16–20} Although the Prism Model sets the stage for understanding the full potential of AH interventions in UME, assuming the model applies equally in GME without further deep exploration risks misunderstanding the unique challenges experienced by interns and other GME learners.

In this study, we build on our prior work^{21,22} with AH interventions in GME to ask the following: What is the potential of a longitudinal curriculum incorporating AHs for the personal and professional development of internal medicine interns throughout the intern year? To answer this question and to fill a gap in the literature related to what AHs teaching is trying to effect in GME, we conducted a longitudinal qualitative study that drew on in-depth interviews and longitudinal audio-diaries (LADs).^{23–26}

Method

More than a subset of qualitative methods, longitudinal qualitative research entails collecting qualitative data from the same participants during an extended period to capture change in lived experiences as those experiences unfold in real time.^{24,25} Working within this methodology, we took a subjectivist, interpretivist approach to inquiry that allowed us to engage with an existing conceptual model with sufficient depth to answer our research question.^{14,27}

Our research team included individuals with experience in and affinity for the humanities (A.R.O., F.H., M.S., O.T.) and individuals with graduate-level training in medical education and experience in qualitative research (A.R.O., D.F.B.). A.R.O. and O.T. were graduates of the internal medicine residency program, and at the time of the study, M.S. was a senior resident in the residency program. F.H. and O.T. were facilitators in a yearlong

curriculum incorporating AHs (see below), and A.R.O. was a facilitator for a visual art session within this curriculum. Although interns were not formally evaluated in the curriculum, we acknowledge that our familiarity with the program and our role as session facilitators shaped our analysis by sensitizing us to the broader experiences of the interns beyond the scope of this longitudinal study. This study was deemed exempt by the University of Pennsylvania Institutional Review Board.

Context and curriculum

We conducted this study in a large internal medical residency program at an urban academic medical center from September 2021 to June 2022. Our longitudinal qualitative research ran in parallel with a preexisting, yearlong curriculum incorporating AHs for postgraduate year 1 internal medicine interns. This curriculum was developed to introduce interns to evidence-based techniques to improve resilience during training, including strategic self-care and healthful emotional processing (Table 1).²⁸ The topics that were addressed throughout the curriculum were identified experientially by the directors (F.H., O.T.) and/or via feedback from interns. The curriculum included 5 mandatory sessions, recurring once each ambulatory block throughout the year. Ambulatory blocks lasted 2 weeks and were preceded and followed by 6 weeks of inpatient rotations. Four of the 5 sessions included AH interventions, such as narrative medicine exercises or visual art pedagogy; all included a check-in and structured instruction followed by unstructured time for facilitated group discussion.

Study participants

We sent a recruitment email to the entire 70-member intern class in August 2021. We offered a \$100 Amazon gift card as incentive for completion of all 5 LAD entries and both semistructured interviews during the 10-month study period. Fourteen interns (20%) volunteered, with 13 of the 14 (93%) completing the study (1 was lost to follow-up after the first semistructured interview).

Data collection

Audio-diaries. Immediately after each session, we emailed participating interns asking them to record a 2- to 5-minute LAD in response to an assigned prompt.

We wrote prompts to trigger reflection on how AHs were shaping their internship experience, if at all (see Figure 1 for prompts). Interns recorded LADs using the Voice Memos app preloaded on iPhones supplied by the residency program and emailed them to A.R.O. for anonymized storage on a secure, shared drive through the institution. Actual submission times were quite variable, ranging from less than 1 day to several weeks after the prompt was emailed. A.R.O. sent a weekly reminder email to interns who had not yet submitted responses. The LAD response rate among all participating interns was 91% (64 of 70 submissions), with a mean LAD length of 3 minutes.

Interviews. At midyear (December 2021) and at year's end (June 2022), 3 of us (A.R.O., F.H., M.S.) conducted 45- to 60-minute semistructured interviews with participating interns. Consistent with longitudinal qualitative research, interview guides were recursive and iteratively developed; that is, interns' own narratives were shared back to elicit reflection. The interview guides were initially informed by the Prism Model with focus on its personal insight domain, but as longitudinal qualitative research progressed, theories of AHs outside medicine shaped our thinking (see Supplemental Digital Appendix 1 at <http://links.lww.com/ACADMED/B605>, for final interview guides).^{14,15,29,30} Audio files from interviews were also stored on a secure, shared drive. All 14 interns did the first interview, and all but 1 did the second interview, for a total 96% completion rate.

Data analysis

A.R.O. transcribed LADs verbatim, and a professional transcription company transcribed the interviews verbatim. We used Dedoose, version 9.0.62 (Dedoose, Los Angeles, California), to manage our longitudinal qualitative dataset.

Data collection and analysis were iterative processes in this longitudinal qualitative study. A.R.O. led the analysis by reading interview and LAD transcripts and creating codes inductively from concepts he recognized in the data. He borrowed concepts from the Prism Model, thus creating some codes deductively.^{6,14,15,31} We discussed codes as a team and created a preliminary code list; then A.R.O. applied codes to the data. Data from interviews complemented and expanded on data from LADs, so we used the same

Table 1
Longitudinal Arts and Humanities Curriculum Format

Session title	Duration, h	Learning objectives	AH intervention
Strategies for Challenging Transitions	1	<ul style="list-style-type: none"> Understand the concept of strategic self-care Describe mindfulness and sleep strategies that can be used during residency 	None (strictly facilitated group discussion)
Processing Emotions Healthfully	1.5	<ul style="list-style-type: none"> Review a framework for healthy storage and processing of emotions Reflect on emotions and experiences of residency with peers 	Art creation pair/share in which interns depict emotions experienced during residency through pictures or phrases and share with a partner
Transforming the Inner Critic: Strategies for Imposter Syndrome and Perfectionism	1	<ul style="list-style-type: none"> Learn common cognitive distortions including imposter syndrome, perfectionism, and the inner critic Identify strategies (growth mindset, self-compassion, mindfulness) to transform the "inner critic" into an "inner coach" 	Brief reading from <i>Intern: A Doctor's Initiation</i> ³⁶ followed by reflective writing exercise to list activities that drain or sustain energy during the workday
The Art of Medicine: An Integrated Session at the Philadelphia Museum of Art	3	<ul style="list-style-type: none"> Practice skills of intentional observation Reflect on how personal experience influences clinical practice Strengthen connections with colleagues through facilitated art-based discussion 	Museum-based visual art workshop, ²¹ including Artful Thinking Routines ³⁷ and a Personal Responses Tour ³⁸
Helping Yourself and Your Teams During Times of Moral Distress	1	<ul style="list-style-type: none"> Review the spectrum of moral uncertainty, moral dilemma, and moral distress Identify personal and structural constraints that contribute to moral distress Identify strategies for addressing moral distress 	Narrative medicine exercise using narratives of challenging patient encounters to foster discussion about moral distress

Abbreviation: AH, arts and humanities.

codebook across the dataset. A.R.O. iteratively revised and added codes as he saw new concepts in incoming data. To deepen analytic engagement, 2 of us (F.H. and M.S.) also coded an interview and 2 LADs using the preliminary code list. Throughout the coding process, D.F.B. reviewed and commented on coded

interviews and LADs. After the collection of all data (Figure 1) was completed, A.R.O. returned to the entire dataset to ensure coding accuracy.

In final stages of analysis, we clustered coded data into 3 central organizing concepts (i.e., themes) that reflected

shared meaning on the potential of AH instruction among the group of interns: reclaiming personal sense of self, building community, and surfacing empathy. In line with longitudinal qualitative research, we attended to when and how these themes played out (or not) through time. To track individual stories, A.R.O.

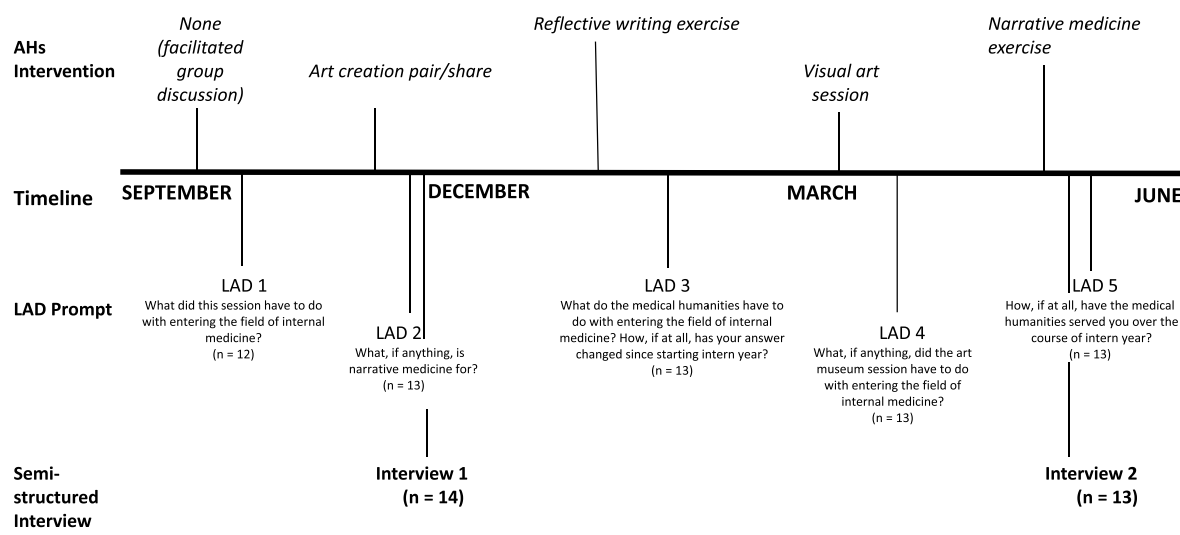


Figure 1 Data collection timeline for a longitudinal qualitative study on the arts and humanities (AHs) in intern training. Abbreviation: LAD, longitudinal audio-diary.

compiled a time-ordered data display from interview and LAD transcripts for each participating intern. Given the volume of data, he concentrated on data displays of 7 interns for whom the 3 themes were salient. In November 2022, we presented this study at a medical education research works-in-progress session at our institution. On the basis of feedback from the session, A.R.O. opted to select the stories of 2 individual interns whose trajectories resonated most with our research question about the potential of AH instruction for personal and professional development. Finally, in May 2023, as our interns approached the end of their second postgraduate year, we shared our general findings with them and confirmed consistency with their recollected experiences of AHs and the curriculum.

Results

General understanding of AH interventions

Our intern cohort included 10 women (71%) and 4 men (29%). Below, we share illustrative quotations to reflect the perspectives of interns. We use interns' own words along with pseudonyms and interview or LAD number.

At baseline, interns reported variable levels of experience with AHs before residency. Slightly more than half endorsed prior engagement in AHs, such

as enrolling in humanities tracks in medical school or majoring in a social science in college. By comparison, the remaining interns reported little engagement with AHs before residency.

In the final interview, we asked explicitly about the relevance of AHs to their practice. Regardless of prior experience with AHs, most interns believed that the abstract benefits, akin to Kumagai's¹¹ "human understanding" lens, promoted by AH interventions conferred greater value to their current and future practice than the concrete skills, akin to Kumagai's¹¹ "technical rationality" lens. This finding was consistent with what interns expressed throughout the study. For example, one intern clarified this distinction as it related to a visual art exercise: "I enjoyed that exercise of close observation. I didn't enjoy it because it taught me a skill, I enjoyed it because it was the opportunity to reflect on something that I was doing and observe myself observing" (Monique, interview 2). Similarly, another intern distinguished between what AH interventions added to his training and what they did not:

We're all good at observing and we're all analytical and looking at data so I don't ... I didn't really think that some of the exercises [built] those skills. I don't think we needed as much augmentation in those skills as we did in the, kind of, switching gears in perspectives and of [building] personal relationships. (Sam, interview 2)

Potential of AH interventions: Findings from the group

Although they experienced the benefits differently, all interns detailed valuable abstract benefits derived from AHs, which serve as central organizing concepts or themes for this study (Figure 2). These abstract benefits reflect the full potential of AH instruction, with reclaiming sense of self, building community, and surfacing empathy apparent across time in the dataset, pointing to long-term effects of the AH interventions in this cohort.

Reclaiming personal identity. From the beginning, interns appreciated AHs curricular sessions as a "cooldown" from workdays that are "absolutely nonstop." Amid a hectic work schedule, interns viewed the sessions as offering rare and valuable opportunities for dedicated reflection on important questions: "Are you being the person that you want to be within your relationships, with your friends, with your partner? Are you doing what you set out to do from a professional standpoint?" (Austin, LAD 1).

Reflections triggered by AHs often led to significant personal insights. For some interns, pausing to process their experience at work during AH sessions throughout the year "recentered" and "reminded [them] why I chose to go into medicine" (Sam, LAD 5). Reconnected with their underlying purposes for

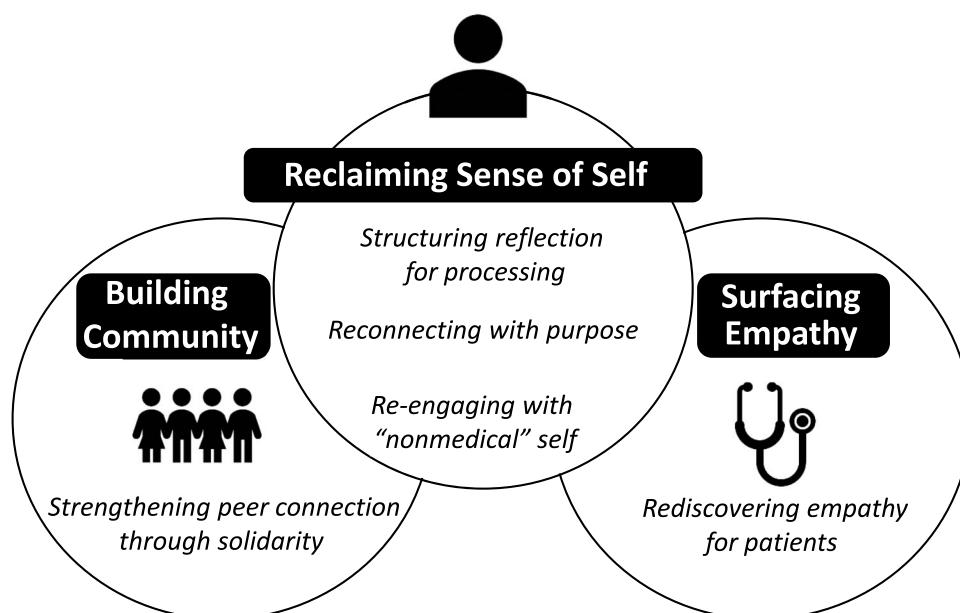


Figure 2 Potential of arts and humanities interventions in intern education.

entering medicine, interns returned to daily tasks with renewed perspective:

A lot of the reason I went into medicine was to help my and other disadvantaged communities. Using different tools that are principled in narrative medicine has helped me stay grounded as to my “why” ... and not just go through the motions of residency. (Holly, LAD 2)

For other interns, reflection focused on life outside work. As the year progressed, interns came to recognize the risk of “losing your whole personality” when working “14-hour days” where “you come home, you eat dinner or workout, and then you go to bed” (Dakota, interview 2). Some interns admitted that “at first there was this huge sense of guilt” merging the personal and professional self and “allowing ourselves to be real people outside of the hospital” (Zoe, interview 2). Several interns reached a new understanding in this attempt to reconcile personal identity with heavy professional demands: “a physician or any health care worker isn’t just that role, they’re a human being who needs a break every once in a while” (Spencer, interview 2). By the end of the year, interns endorsed the power of reflection through AH interventions such as “reading or writing” to “reconnect with who I am outside of medicine” (Dakota, interview 2) and grant permission that “outside the hospital, it’s okay for me not to be a doctor. I can just be who I want to be” (Zoe, interview 2).

Building community. Starting an unfamiliar role in a new environment led many interns to feel isolated at the beginning of the study period: “It’s been challenging, to say the least, to go through intern year, especially in a city where I don’t really know many people” (Zoe, LAD 1). Early AH sessions with peers opened the door for “discussions about the difficulties with intern year” (Nora, interview 1) that helped decrease feelings of isolation. In these discussions, interns were surprised to learn that “you’re not alone” (Nora, interview 1) and that “many of my co-residents had similar emotions and experiences and thoughts about residency thus far” (Zoe, LAD 1).

As the year progressed, a sense of community among interns blossomed through ongoing discussions of shared experiences within the AH curriculum: “I walked away from almost every session

feeling like I knew my colleagues better. I had learned something about someone or I saw someone being vulnerable, which invites me to be vulnerable around that person” (Zoe, interview 2). These moments of vulnerability allowed interns to come to know each other beyond their “shiny exteriors,” further decreasing the sense of isolation: “Other people are having their own trouble and I’m not alone in feeling that way and it doesn’t mean I’m not supposed to be here” (Dakota, LAD 5). As the group bonded, discussion of shared experiences became even more valuable: “I find it more helpful now to hear other people having similar experiences to me and processing things similarly ... that aspect of seeing your experience reflected back is more valuable to me now than it was [earlier in intern year]” (Divya, LAD 3).

Reflecting at year’s end on the entire AH curriculum, one intern articulated how it provided “more understanding of a shared experience, whether it’s between myself and the other interns or between myself and, sort of, everyone who’s come before me” (Monique, LAD 5). This reassurance in the shared experiences, feelings of isolation, and struggles to create community as expressed in the AH sessions “helps you find some amount of comfort in the fact that what you’re experiencing you are not doing it alone” (Monique, LAD 5).

Surfacing empathy. Interns expressed frustration at “spending like 90% of our day behind a computer” and thus valued AHs as a “humanizing” tool to “shift your perspective to the patient’s point of view or patient’s family’s point of view” (Dakota, LAD 3). For many interns, the regular check-ins during AH sessions “really helped to reinforce that we were treating human beings” (Sam, LAD 5) and “not just charting on a screen and it’s going nowhere” (Dakota, LAD 3). The art museum session, in particular, triggered renewed awareness of patients as full and dynamic human beings and not simply laboratory values or disease processes:

The art museum session was a very refreshing reminder of some of the things that motivated me to pursue medicine in the first place and that’s—a lot of it had to do with, you know, the human experience and often times the humanity associated with suffering or very powerful emotional experiences. (Spencer, LAD 4)

This reemergence of the human element of patient care through AH interventions helped to restore purpose in the workplace in its own right: “I’ve always known I enjoy my patient interactions, but I think I’ve learned that this is what really fills my cup and without those experiences I do feel more burnt out” (Holly, interview 2). When looking back on the year, AH interventions helped to surface empathy and ultimately bolster connections with patients even during trying times: “Using those ‘medical humanities’ skills and really connecting with your patients ... is definitely something that has sustained [me] over the course of intern year” (Virginia, LAD 5).

Potential of AH interventions: Findings from individuals

To illustrate the interplay of themes through time in the lives of individuals, we share the stories of 2 interns. Both arrived at a holistic understanding of how AHs shaped their intern experience albeit by different trajectories. Sarah’s appreciation for AHs increased steadily, whereas Jordan struggled with the practical utility of AHs midyear before returning to recognition of its value by the end of the year.

Sarah’s story: AHs as a stable “grounding point.” Sarah started her intern year knowing that she enjoyed engaging with the arts in her free time but had no prior formal engagement with AHs. During the study, she gradually came to internalize the benefits of AHs named above. Reflecting on the first half of the year, however, she described the day-to-day life of an intern as painful and isolating: “I did not anticipate feeling so lonely in a scenario where I’m literally doing the same thing as some of the other people at the same time in the same city” (interview 1). The AH sessions during this time helped her feel “so much less alone,” and she would impart to future interns that a primary purpose of the curriculum is to provide “a community of people who care about you and understand what you’re going through” (interview 1).

Sarah’s emphasis on the humanity of her patients also grew stronger. She entered the study with an appreciation that AHs “allow[s] us to better humanize our patients.... And see them in a fuller picture as people that are complex and dynamic” (LAD 2). As the year progressed, her clinical experiences

reaffirmed the value of AHs to the practice of medicine in this way: “I think the medical humanities are essential to the practice of medicine ... I have only found them more important as I’ve gone through my intern year” (LAD 3).

As the year wound down, Sarah also internalized the personal benefits afforded by AHs. She appreciated the art museum session as a chance for reflection after months of a chaotic work environment: “We spend so much time not being able to slow down and just *exist* that it felt very precious to have designated time to do so ... just *being* is like a precious, precious opportunity” (LAD 4). At the end of the year, she noted that the work of an intern “is a job that can really pull you away from yourself if you are not mindful of what’s going on and if you don’t check in with yourself on a regular basis”; however, she was grateful for AHs serving as a reliable “grounding point throughout the entire year” that connected her back to “who I am but also made me more holistic in a way that allowed me to continue to view my patients more holistically” (LAD 5).

Jordan’s story: AHs lost “in the weeds,” then rediscovered. Jordan’s arc tells a story of preexisting respect for AHs. Early in the year, Jordan relished thinking differently through the arts compared with the typical style of thinking demanded by intern year: “When the facilitator put up the poem, it sort of lit up this part of my brain that has truly been dormant for quite some time” (LAD 2). From the beginning of the study, Jordan appreciated how the humanities “help us to think more deeply, creatively than we would otherwise” and valued the medical humanities as a “way to prioritize the patient story” and a “grounding force” to bring us back to the root of medicine: taking care of others (LAD 2).

However, at midyear, Jordan struggled to put these benefits of AHs to use in the face of the “monotony” and heavy workload of intern year:

I’d like to believe that I still let prioritizing the patient story drive, you know, my history-taking or how I formulate H and Ps [histories and physical exams], but the truth of the matter is in the day-to-day of intern year and especially at this point of intern year it can be hard to find it in the monotony. (LAD 3)

Jordan questioned how AHs can be helpful when one is “stuck in the weeds” of intern year and wondered, “I guess that’s sort of an interesting question for myself: ‘what are ways to take narrative medicine into the weeds?’ I don’t really have an answer to that yet” (LAD 3).

As the year drew to a close, the art museum visit sparked renewed appreciation for the different types of thinking used in AHs and the chance to “use a part of our brains that we use often times in medicine but it’s, sort of like, hidden behind the more objective things” (LAD 4). Jordan also began to recognize, through AHs, the need to nourish the “nonmedical” sides of the brain because “all of those parts of me are equally as important, even if 80% of my time is spent doctoring” (interview 2). On final reflection, Jordan appreciated AHs as a tool to “help remind me of the things that are important to me outside of the hospital and outside of work” because “taking care of those other parts of me that I feel like the medical humanities really help refine is what makes me a better doctor” (LAD 5).

Discussion

The experiences of this longitudinal cohort provide insight into the transformative potential of AH instruction in GME. Through regular reflections on how AHs were shaping their experience (if at all), interns came to their own understanding of what AHs are “trying” to achieve within them in the context of their daily lives. Specifically, AHs opened possibilities for reclaiming a holistic sense of self, building community with peers, and surfacing empathy for patients. Although the potential for these changes was evident throughout the study, how they played out in the lives of individuals was different.

Participants’ lived understanding elaborates on a prior conceptual model describing the goals of AH instruction and extends it for a GME population.¹⁴ Our findings corroborate the “Personal Insight” domain of the Prism Model as a potential and valuable goal of AH instruction in GME. As a forced break from intense clinical work, AH interventions provided time to reflect on one’s purpose for entering medicine, regain sense of self, and realign priorities to pursue activities that were truly

restorative.³² Our findings also support the power of overlap with Prism’s “Perspective Taking” domain because reflection on one’s purpose in work often leads to reminders for interns to adopt the perspectives of the full and complex individuals under their care. Furthermore, these findings raise the possibility that AH interventions may offer a tool to periodically bring empathy back to the surface despite previously reported declines throughout internship.³³

What seems to be missing from the Prism Model, however, is the remarkable capacity of AH interventions to build peer relationships by allowing the expression of vulnerability. Discussions facilitated by works of art led to open, curious, and vulnerable conversations that decrease feelings of isolation and imposter syndrome.³⁴ Talking through a work of art as a “third thing” allowed for an additional level of honesty in the conversation that bolstered these peer connections.³⁵ This finding may be more specific to GME, where learners face new stressors and have limited time and protected environments to discuss challenging experiences with colleagues. Finally, our cohort’s majority preference for the abstract benefits of AHs rather than concrete skills suggests that addressing the “Mastering Skills” domain may be more applicable in UME than GME.

The study is limited in that this is a single-center study with interns who self-selected for participation and may view AH interventions more favorably. Additionally, interns were not asked whether they identify as underrepresented in medicine, and men are underrepresented in our cohort (29%) compared with the postgraduate year 1 class as a whole (43%). That said, we opted not for breadth of inquiry but depth, with a longitudinal design, active participant engagement, large number of data points, and recursive interviewing techniques (with built-in checks on how evolving findings resonated with the interns). Moreover, building on a prior AHs model designed for a broader medical education audience enhances the transferability of our findings. Although we cannot make claims about causality of AH interventions, we believe that AH interventions alongside peer group discussions have utility in GME populations, which have traditionally been underrepresented in AH literature.

The abstract benefits of AH interventions described by our interns suggest that these benefits can be targeted as areas for future AH interventions in GME. Our detailed results from prolonged engagement with interns receiving continual AH instruction also suggest that longitudinal qualitative research holds promise as a means of further capturing the transformative potential of AH instruction that has previously proven elusive.

Conclusions

Despite varying levels of prior experience with AHs, interns in this longitudinal qualitative research study consistently expressed appreciation for AH instruction and recognized its potential for reclaiming sense of self, building community, and surfacing empathy for patients. Taken together, AHs served as an anchor to a more holistic view of self, which had downstream consequences for patient care and relationships with peers. During a stressful year, AH interventions called interns back to their own humanity and connected them to the humanity of their peers and their patients. Future curricula can leverage this ability to create meaningful connections with one's personal identity, peers, and patients to maximize the potential of AH instruction for graduate medical education learners.

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References

- Moniz T, Golafshani M, Gaspar CM, et al. How are the arts and humanities used in medical education? Results of a scoping review. *Acad Med.* 2021;96(8):1213–1222.
- Howley L, Gauferg E, King B. The Fundamental Role of the Arts and Humanities in Medical Education. Association of American Medical Colleges; 2020.
- Alkhaifi M, Clayton A, Kangasjarvi E, et al. Visual art-based training in undergraduate medical education: a systematic review. *Med Teach.* 2022;44(5):500–509.
- Dalia Y, Milam EC, Rieder EA. Art in medical education: a review. *J Grad Med Educ.* 2020;12(6):686–695.
- Mukunda N, Moghbeli N, Rizzo A, et al. Visual art instruction in medical education: a narrative review. *Med Educ Online.* 2019;24(1):1558657.
- Dennhardt S, Apramian T, Lingard L, et al. Rethinking research in the medical humanities: a scoping review and narrative synthesis of quantitative outcome studies. *Med Educ.* 2016;50(3):285–299.
- Harrison MB, Chiota-McCollum N. Education research: an arts-based curriculum for neurology residents. *Neurology.* 2019;92(8):e879–e883.
- Cohen SM, Dai A, Katz JT, et al. Art in surgery: a review of art-based medical humanities curricula in surgical residency. *J Surg Educ.* 2023;80(3):393–406.
- Kumar AM, Lee GH, Stevens LA, et al. Using visual arts education in dermatology to benefit resident wellness and clinical communication. *MedEdPORTAL.* 2021;17:11133.
- van Woezik TE, Stap TB, van der Wilt GJ, et al. Seeing the other: how residents expand their perspective by learning with the arts. *J Grad Med Educ.* 2023;15(1):50–58.
- Kumagai AK. The powers of a fish: clinical thinking, humanistic thinking, and different ways of knowing. *Acad Med.* 2022;97(8):1114–1116.
- Prince G, Osipov R, Mazzella AJ, et al. Linking the humanities with clinical reasoning: proposing an integrative conceptual model for a graduate medical education humanities curriculum. *Acad Med.* 2022;97(8):1151–1157.
- Singer AM, DeBenedictis CM, Rosen MP. Integrating art museum visits into the radiology curriculum: a program to encourage engagement, observation and analytic skills among millennial learners. *Clin Imaging.* 2021;79:204–206.
- Moniz T, Golafshani M, Gaspar CM, et al. The prism model: advancing a theory of practice for arts and humanities in medical education. *Perspect Med Educ.* 2021;10(4):207–214.
- Moniz T, Golafshani M, Gaspar CM, et al. The prism model for integrating the arts and humanities into medical education. *Acad Med.* 2021;96(8):1225.
- Miller E, Balmer D, Hermann N, et al. Sounding narrative medicine: studying students' professional identity development at Columbia University College of Physicians and Surgeons. *Acad Med.* 2014;89(2):335–342.
- Aluri J, Ker J, Marr B, et al. The role of arts-based curricula in professional identity formation: results of a qualitative analysis of learner's written reflections. *Med Educ Online.* 2023;28(1):2145105.
- He B, Prasad S, Higashi RT, et al. The art of observation: a qualitative analysis of medical students' experiences. *BMC Med Educ.* 2019;19(1):234.
- Gowda D, Dubroff R, Willieme A, et al. Art as sanctuary: a four-year mixed-methods evaluation of a visual art course addressing uncertainty through reflection. *Acad Med.* 2018;93(11 Suppl):S8–S13.
- Tackett S, Eller L, Scharff S, et al. Transformative experiences at art museums to support flourishing in medicine. *Med Educ Online.* 2023;28(1):2202914.
- Orr A, Moghbeli N, Swain A, et al. The fostering resilience through art in medical education (FRAME) workshop: a partnership with the Philadelphia Museum of Art. *Adv Med Educ Pract.* 2019;10:361–369.
- Orr A, Hussain F, Tomescu O, et al. Extending arts-based interventions in graduate medical education through the positive humanities: the Re-FRAME Workshop. *J Gen Intern Med.* 2023;38(14):3252–3256.
- Verma A. Using audio-diaries for research and education: AMEE Guide No. 144. *Med Teach.* 2021;43(12):1346–1352.
- Balmer DF, Varpio L, Bennett D, et al. Longitudinal qualitative research in medical education: time to conceptualise time. *Med Educ.* 2021;55(11):1253–1260.
- Balmer DF, Richards BF. Longitudinal qualitative research in medical education. *Perspect Med Educ.* 2017;6(5):306–310.
- Balmer DF, Richards BF. Conducting qualitative research through time: how might theory be useful in longitudinal qualitative research? *Adv Health Sci Educ Theory Pract.* 2022;27(1):277–288.
- Auduly A, Hall EOC, Kneck A, et al. Qualitative longitudinal research in health research: a method study. *BMC Med Res Methodol.* 2022;22(1):255.
- Hussain F, Yaden ME, Tomescu O. Individually focused well-being interventions. In: Ripp J, Charney DS, eds. *Caring for Caregivers to Be: A Comprehensive Approach*

- to Developing Well-Being Programs for the Health Care Learner. Oxford University Press; 2023.
- 29 Seligman M. PERMA and the building blocks of well-being. *J Positive Psychol.* 2018; 333–335.
- 30 Louis T, Paweslki JO. *The Oxford Handbook of the Positive Humanities.* Oxford University Press; 2021.
- 31 Humanities and Human Flourishing Project Conceptual Model. Accessed April 24, 2024. <https://www.humanitiesandhumanflourishing.org/conceptual-model>
- 32 Abedini NC, Stack SW, Goodman JL, et al. “It’s not just time off”: a framework for understanding factors promoting recovery from burnout among internal medicine residents. *J Grad Med Educ.* 2018;10(1):26–32.
- 33 Bellini LM, Shea JA. Mood change and empathy decline persist during three years of internal medicine training. *Acad Med.* 2005; 80(2):164–167.
- 34 Fainstad T, Mann A, Suresh K, et al. Effect of a novel online group-coaching program to reduce burnout in female resident physicians: a randomized clinical trial. *JAMA Netw Open.* 2022;5(5):e2210752.
- 35 Gaufberg E, Batalden M. The third thing in medical education. *Clin Teach.* 2007;4(2): 78–81.

References cited in Table 1 only

- 36 Jauhar S. *Intern: A Doctor's Initiation.* Farrar Straus and Giroux; 2009.
- 37 Tishman S. *Artful Thinking: Stronger Thinking and Learning Through the Power of Art Final Report.* Harvard Graduate School of Education; 2006.
- 38 Gaufberg E, Williams R. Reflection in a museum setting: the personal responses tour. *J Grad Med Educ.* 2011;3(4):546–549.

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